This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

SYRUPUS HYPOPHOSPHITUM FELLOWS

One of the most efficient, most complete, and best all-round Tonics in the Materia Medica!

For four and a half decades its reputation has been constantly increasing!

The Medical Fortnightly

tes
d"

Gray's Glycerine Tonic Comp.

FORMULA DR. JOHN P. GRAY.

CONSTITUENTS

GLYCERINE
SHERRY WINE
GENTIAN
TARAXACUM
PHOSPHORIC ACID
CARMINATIVES

DOSAGE - ADULTS: TWO TO FOUR TEASPOONFULS IN A LITTLE WATER BEFORE MEALS THREE OR FOUR TIMES DAILY.

CHILDREN - ONE-HALF TO ONE TEASPOONFUL IN WATER BEFORE MEALS.

INDICATIONS

AUTO-INTOXICATION
ATONIC INDIGESTION
ANEMIA
CATARRHAL CONDITIONS
MALNUTRITION
NERVOUS AILMENTS
GENERAL DEBILITY

"GRAY'S" IS THE IDEAL HOT WEATHER TONIC FOR THE SUFFERER FROM CHRONIC ORGANIC DISEASE, MALNUTRITION, OR DEBILITATED CONDITIONS GENERALLY.

THE PURDUE FREDERICK CO. 135 Christopher St., New York.

No physician can afford to take any risk of substitution, if he values his good name.

In Using Bromides

the main consideration is the purity of the salts employed. Many physicians realize this and in consequence use

PEACOCK'S
BROMIDES

in preference to all other bromide preparations. Experience has shown them that the purity and quality of this high grade product assure not only maximum therapeutic efficiency, but also gratifying freedom from gastric disturbance or other disagreeable effects.

DOSAGE--One to three drachms; each drachm contains fifteen grains of bromides.

Hepatic Stimulation

is often desired without the incidental production of pronounced catharsis. Under these conditions

CHIONIA

is especially indicated, as it can be relied upon to increase the activity of the liver without causing diarrhea or bowel irritation. Chionia, therefore, is particularly valuable in jaundice, biliousness, and hepatic torpor generally.

DOSAGE --- One to two teaspoonfuls three times a day

PEACOCK CHEMICAL CO., ST. LOUIS, MO.

Digitized by Google

Suggestions for the use of Corpora Lutea.

1. Functional amenorrhea or scanty menstruation.
2. Dysmenorrhea of ovarian origin.
3. Manifestations of physiologic or artificial menopause, such as nervous or congestive disturbances of reflex origin (hot flashes, psychoneuroses, etc.).
4. Neurasthenic symptoms during menstrual life.
5. Sterility not due to pyogenic infection or mechanical obstruction.
6. When the function of one ovary is impaired, or when one ovary has been removed and the compensatory activity of the other is insufficient.
7. Repeated abortions not due to disease or mechanical factors.
8. Hyperemesis in the early months of pregnancy.
9. Migraine occurring at the time of the menstrual period.

◆ ◆ ◆

We have reports of numerous cases in which **Corpora Lutea, P. D. & Co.**, was used with marked success after other ovarian preparations had failed.

CAPSULES

CORPORA LUTEA (DESICCATED)

each containing 5 grains,
equivalent to about 30 grains of fresh corpus luteum.

Bottles of 50 and 100.

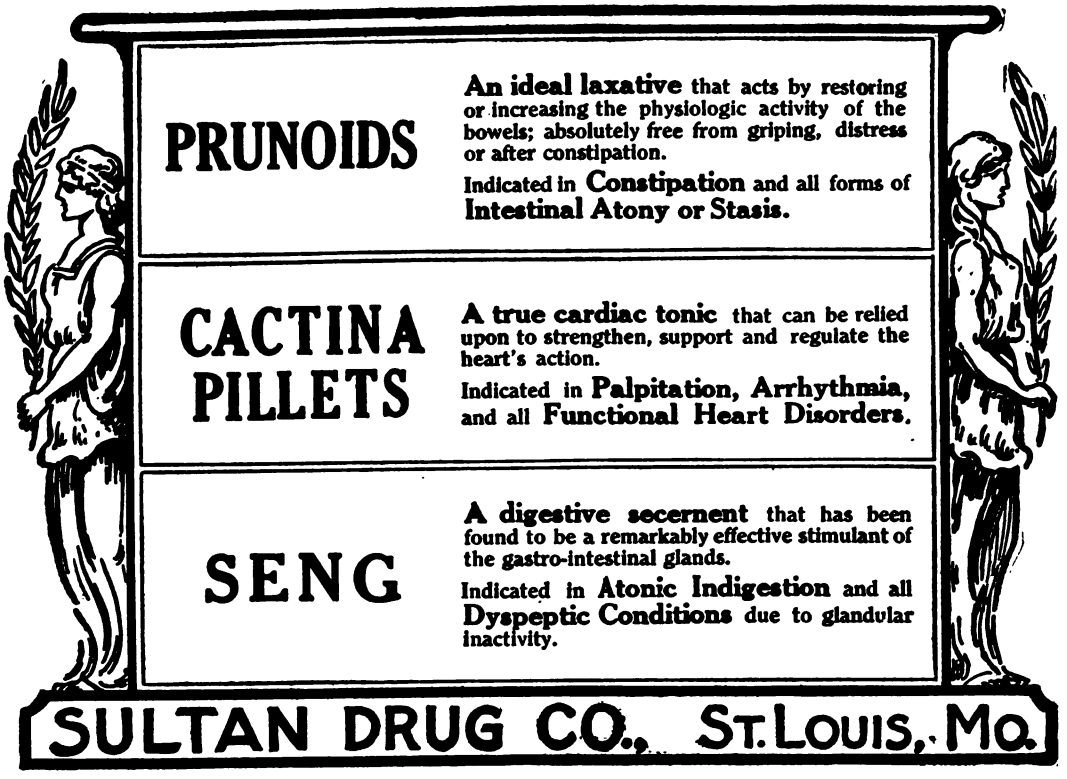
Dose: one capsule to be taken at least an hour before meals; may be increased to two capsules *pro re nata*.

WRITE FOR LITERATURE.

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

Digitized by Google


PRUNOIDS
An ideal laxative that acts by restoring or increasing the physiologic activity of the bowels; absolutely free from griping, distress or after constipation.
Indicated in Constipation and all forms of Intestinal Atony or Stasis.
CACTINA PILLETS
A true cardiac tonic that can be relied upon to strengthen, support and regulate the heart's action.
Indicated in Palpitation, Arrhythmia, and all Functional Heart Disorders.
SENG
A digestive secernent that has been found to be a remarkably effective stimulant of the gastro-intestinal glands.
Indicated in Atonic Indigestion and all Dyspeptic Conditions due to glandular inactivity.
SULTAN DRUG CO., ST. LOUIS, MO.

No physician can afford to be indifferent regarding the accurate filling of his prescriptions.

We Make WASSERMANN TEST INCLUDING HECHT-WEINBERG TEST **$5.00**

ALL LABORATORY WORK FOR PHYSICIANS AT MODERATE RATES

PASTEUR TREATMENT - - **$50.00**

Eighteen Doses Mailed on Successive Days Including one 5 c.c. all Glass Syringe with Needles.....

We Sell WASSERMANN REAGENTS Carefully Titrated

Antigen cholesterin fortified one vial enough for 30 tests **$3.00**

Anti-Sheep Amboceptor 1 c.c. vial..... **4.00**

Anti-Human Amboceptor, each.....

We Prepare A potent, sterile and concentrated **Emulsion of Mercury Salicylate** in 20 c.c. vial ready for **Hypodermic use**, price..... **$1.50**
Weekly dose, 5 minims (Representing 1 grain)

Write for Literature on Laboratory Work. Mailing Cases for sending in blood and other material furnished FREE on demand.

GRADWOHL BIOLOGICAL LABORATORIES
R. B. H. GRADWOHL, M.D., Director **803 N. Garrison Ave., ST. LOUIS, MO.**

Digitized by Google

ERGOAPIOL (Smith)

For
AMENORRHEA
DYSMENORRHEA
MENORRHAGIA
METRORRHAGIA
ETC.

ERGOAPIOL (Smith) is supplied only in packages containing twenty capsules.

DOSE: One to two capsules three or four times a day.

SAMPLES and LITERATURE SENT ON REQUEST.

MARTIN H. SMITH COMPANY, New York, N.Y.,U.S.A.

Iron and Manganese Peptonates in Hoff's Malt Extract . . .

FOREMOST RELIABILITY

OUR medical friends who have long been prescribing HOFF'S MALT EXTRACTS (plain and with Iron) need no new proof of their reliability. The world-wide reputation of "HOFF'S" has not grown up in a day. It began sixty-seven years ago and always has held the foremost place among medicinal Malt Extracts for Purity, Quality, and Nutritive and Digestive Value. The secret of "HOFF'S" reputation is QUALITY.

"The merits of Johann Hoff's Malt Extracts are too well established to need further confirmation."—Dr. H. J. Achard, Manchester, N. H.

Always specify "Hoff's"

Glyco-Thymoline is of benefit for teething babies; a little rubbed on the gums, rapidly reduces the inflammation and conserves the little one's comfort.

Used for flushing the colon, it eliminates all septic matter, preventing autointoxication and reducing the temperature.

Glyco-Thymoline used internally corrects hyperacidity and prevents fermentation.

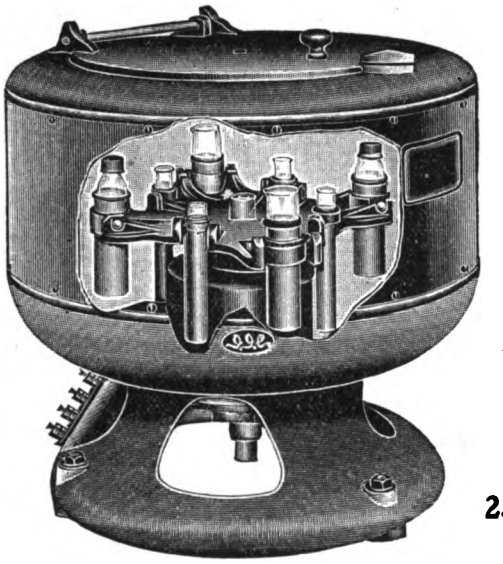
Kress & Owen Company

361-363 PEARL ST. - NEW YORK

Sole Agents for Great Britain
THOMAS CHRISTY & CO.
41a and 12 Old Swan Lane, London, E. C. England.

Digitized by Google

POWERFUL
Electric Centrifuges



FOR LABORATORY USE OF PHYSICIANS OR INSTITUTIONS

Made in a variety of sizes and with a wide range of power and capacity

SPECIALLY SUITED TO
Bacteriological, Serological, Chemical Analysis

SEND FOR CATALOGUE Cb

International Instrument Company

23 Church Street, Cambridge, Mass.

Mention this Journal

Do not jeopardize your patient's life by patronizing a druggist who will substitute.

Another Great Discovery

Size 12 x 16, in colors.

Triumph of Love in the Laboratory

FREE to Old and New Subscribers

WE have secured a limited number of this masterpiece by Paul Starr, and will mail one picture to each cash subscriber as long as the supply holds out. If you wish a copy for your reception room or office, fill out the blank below and mail at once.

FORTNIGHTLY PRESS CO., Date.....1915.
Subscription Department.
You may send "THE MEDICAL FORTNIGHTLY AND LABORATORY NEWS" to my address for one year, including the picture. Inclosed find $1.00 in full payment.

....., M. D.

Street or building..... .....

Digitized by Google

American Pharmaceutical product in European hospitals

In all Inflammatory Conditions—whether from wounds or bacteria—in the Hospitals of England, France and Germany, there is full, confident recognition of, and regular, increasing demand for

Antiphlogistine
TRADE MARK

The scientific principles on which Antiphlogistine was originally compounded, have **always** been the **common** property of the Medical profession.

The faithfulness with which the **original** product has, for more than 20 years, been maintained, remains the proud stewardship of the original makers.

Physicians should WRITE "Antiphlogistine" to AVOID "substitutes"

"There's only ONE Antiphlogistine"

MAIN OFFICE AND LABORATORIES

THE DENVER CHEMICAL MFG. CO., NEW YORK, U.S.A.

Branches: LONDON, SYDNEY, BERLIN, PARIS, BUENOS AIRES, BARCELONA, MONTREAL

Do not jeopardize your patient's life by patronizing a druggist who will substitute.

BACTERIOLOGICAL INCUBATORS

Size No. 3, 12x9x9 Inches
Price, $20.00 Net

Electrically heated and automatically controlled. No gas to blow out. No special work to install. Can be attached to any electric light socket, either direct or alternating current. Always ready.
For further information apply to your dealer or write us direct for catalogue giving full description.

Chicago Surgical and Electrical Co.
859 North Franklin St. CHICAGO, ILL.

New York Polyclinic
Medical School and Hospital

341-351 WEST 50TH ST., NEW YORK CITY

General, Separate Clinical and Special Post-Graduate Courses of Individual Instruction.

Laboratory, Cadaver and Operative Courses in all branches.

Individual Instruction in the following branches:

- Physical Diagnosis
- Infant Feeding and Diagnosis
- Tuberculosis (pulmonary, glandular, bone)
- Drug Addictions and Toxemias
- Diseases of the Stomach (including dietetics)
- Dermatology (including laboratory work)
- Rectal diseases
- Non-Operative Gynecology
- X-Ray and Electro-Therapeutics
- Hernia (local anesthesia)
- Cystoscopy (male and female)
- Urethroscopy
- Neurology and Neurological Surgery (brain, spinal cord, peripheral nerves)

For further information, address

JOHN A. WYETH, M. D., LL. D., President of the Faculty, or
JAMES U. NORRIS, Superintendent

Digitized by Google

Diphtheria Antitoxin Mulford

In 1894 **the first commercial biological laboratory for the production of diphtheria antitoxin** in the United States was established by the **H. K. Mulford Company.** In the twenty-one years that have elapsed since its introduction the mortality from diphtheria has been reduced from 38.4 per cent to less than 10 per cent, an it is now the general belief that if diphtheria antitoxin is administered in sufficient doses during the first 24 hours practically all patients will recover.

The H. K. Mulford Company from the first applied the most accurate methods known for standardizing diphtheria antitoxin. Standardization has since come into general use, and a method has been incorporated into the U.S. Pharmacopeia.

The H. K. Mulford Company was the first to affix a return date and to guarantee the potency of the antitoxin up to the date of expiration stated on the label, thus protecting the patient as well as the reputation of the physician and pharmacist, antedating by five years government requirements.

The H. K. Mulford Company was the first to introduce concentrated or high potency serum, in which an extremely large number of antitoxin units are embodied in a very small quantity of serum.

The H. K. Mulford Company originated the method of supplying antitoxin in antiseptic glass syringes, by this means affording convenience of administration and protecting the serum from any possible contamination in handling.

The H. K. Mulford Company was the first American House to supply Antimeningitis, Antidysenteric, Polyvalent Antistreptococcic, Antipneumococcic, and Anti-Anthrax Serums, Bacterins, and Serobacterins.

The above record and the high quality of the Mulford products merit your preference and specification.

Every dose of Mulford Antitoxin furnished in an aseptic glass syringe, ready for instant use.

1000 units (immunizing dose)	4000 units (therapeutic dose)
2000 units (small therapeutic dose)	5000 units (therapeutic dose)
3000 units (medium therapeutic dose)	7500 units (therapeutic dose)
10,000 units (therapeutic dose)	

H. K. MULFORD COMPANY

Manufacturing and Biological Chemists

PHILADELPHIA, U. S. A.

New York	St. Louis	Kansas City	San Francisco	Seattle
Chicago	Atlanta	New Orleans	Minneapolis	Toronto

London: 119 High Holborn

Digitized by Google

To
BUILD
UP
To
BRACE
UP
To
TONE
UP

In ANY form of DEVITALIZATION
prescribe

Pepto-Manyan (Gude)

Especially useful in

ANEMIA of All Varieties:
CHLOROSIS: AMENORRHEA:
BRIGHT'S DISEASE: CHOREA:
TUBERCULOSIS: RICKETS:
RHEUMATISM: MALARIA:
MALNUTRITION: CONVALESCENCE:
As a GENERAL SYSTEMIC TONIC
After LA GRIPPE, TYPHOID, Etc.

DOSE: One tablespoonful after each meal.
Children in proportion.

M. J. BREITENBACH COMPANY
New York, U. S. A.

Supplied in 11-ounce bottles only—never in bulk.

Samples and literature sent upon request.

Prescribe original bottle to avoid substitution.

Our Bacteriological Wall Chart or our Differential Diagnosis Chart will be sent to any Physician upon request.

No physician can afford to be indifferent regarding the accurate filling of his prescriptions.

The Ideal Electrical Illuminating Outfit

for every use and purpose, the most practical and convenient outfit for Physicians and Surgeons where a good light is required and an advantage in making his emergency calls, to examine and treat the

Throat, Nares, Eye, Ear

and many other uses. This complete outfit with all attachments including Tongue Depressor, Ear Speculum and curved and straight metal attachments for the Mouth, etc., and regular pen light which carries in the pocket like a fountain pen, also includes three separate light attachments. Mailed anywhere on receipt of

Price, $3.50

LITERATURE ON REQUEST

IDEAL ELECTRICAL SUPPLY CO.
299 Broadway NEW YORK CITY

St. Louis Maternity Hospital

Under Ethical Professional Management

4516 Washington Ave. ST. LOUIS, MO.

GASTROGEN
TABLETS
Correct
HYPERACIDITY
Sample On Request
Bristol-Myers Co.
Brooklyn, N. Y.

Digitized by Google

SYRUPUS HYPOPHOSPHITUM FELLOWS

One of the most efficient, most complete, and best all-round Tonics in the Materia Medica!

For four and a half decades its reputation has been constantly increasing!

Reject < **Cheap and Inefficient Substitutes** / **Preparations "Just as Good"**

THE FELLOWS MEDICAL MANFG. CO. LTD. 26 CHRISTOPHER ST. NEW YORK

Digitized by Google

THE MEDICAL FORTNIGHTLY

and LABORATORY NEWS

(Consolidated October 1914)

Vol. XLVII SEPTEMBER 15, 1915. No. 9

Papers for the original department must be contributed exclusively to this magazine, and should be in hand at least one month in advance. French and German articles will be translated free of charge, if accepted.

A liberal number of extra copies will be furnished author and reprints may be obtained at cost, if request accompanies the proof.

Engraving from photographs or pen drawings will be furnished when necessary to elucidate the text. Rejected manuscript will be returned if stamps are enclosed for this purpose.

Publication Offices, St. Joseph, Mo.

Editorial and Business Offices, 714 Century Building, St. Louis, Mo.

Kansas City Office, 618 Lathrop Building.

COLLABORATORS

ALBERT ABRAMS, M. D., San Francisco.
A. L. BENEDICT, M. D., Buffalo, N. Y.
S. GROVER BURNETT, M. D., Kansas City.
H. C. CROWELL, M. D., Kansas City.
C. G. CHADDOCK, M. D., St. Louis, Mo.
ARCHIBALD CHURCH, M. D., Chicago.
ARTHUR R. EDWARDS, M. D., Chicago.
FRANK R. FRY, M. D., St. Louis.
J. N. HALL, M. D., Denver.
HOBART A. HARE, M. D., Philadelphia.
MARC RAY HUGHES, M. D., St. Louis.
FRANKLIN H. MARTIN, M. D., Chicago.
E. E. MONTGOMERY, M. D., Philadelphia.
FRANK P. NORBURY, M. D., Hospital, Ill.
A. ROSE, M. D., New York.
EDWIN WALKER, M. D., Evansville, Ind.
REYNOLD WEBB WILCOX, M.D., LL.D., D.C.L., N.Y.
H. M. WHELPLEY, M. D., St. Louis.
WM. H. WILDER, M. D., Chicago, Ill.

ORIGINAL

AUTOSEROTHERAPY.*

ELMO P. PORTERFIELD, M. D.

ST. LOUIS.

In presenting this subject, I desire to state that no especial attempt will be made to explain the biologic, metabolic or serologic changes which take place, but will rather purpose presenting for your consideration a few cases and their results, by the autoserotherapy method. It will be remembered that in 1910 Mayer and Linser reported their results from using the human serum of a pregnant woman, who was perfectly healthy, on another pregnant woman, who showed various evidences of toxemia of pregnancy, as in eclampsia, hyperemesis and various skin manifestations. In 1911 Linser reported 24 cases of urticaria treated with serum. In 1912 Heuck reported his success in such cases as pruritus senilis, urticaria and dermatitis herpetiformis. In 1913 von Lumbush reported his favorable results in pemphigus, he, however, using blood and serum. In 1914 Ullman's reports were much less favorable. The blood and serum of all these cases reported were blood and serum from humans other than the patient to which it was given. In 1913 Spiethoff was the first to use the patient's own serum, in combination with foreign serum. He reported very favorable results in prurigo, pruritus, chronic urticaria, and psoriasis. In 1914, Gottheil and Satenstien reported, in the Medical Record, their experiments in the treatment of skin diseases with human serum; these reports were more or less uniform and extremely satisfactory, especially in cases of psoriasis, when followed by a weak local application of chrysarobin ointment. In December, 1914, Fox, New York, reported uniform and favorable results in the treatment of psoriasis, some 28 cases were reported. His method consisted in using the patient's own serum plus the application of a 10 per cent chrysarobin ointment. He seldom gave over three injections and usually his cases cleared up in three or four weeks. Fox usually took 50 cc. of blood from which he obtained 15 to 20 cc. of serum, which was given to the patient at once, intravenously.

My own work was not only prompted by these reports but by the results I had obtained in several cases of pleurisy with effusion, in which a part of the serum exudate was withdrawn and immediately 1 to 2 cc. given subcutaneously, once daily, for three days. All these cases proved negative for T.B. by inoculation in guinea pigs. The results obtained were alike in all followers of this treatment, prompt absorption of the remaining serum exudate, and in none of my cases did it reform. Knowing that the fluid in pleurisy is exudative in character and that many skin diseases are merely exudates, it occurred to me that the patient's own serum ought to have a favorable result in reducing the exudative processes of the skin as it does in pleurisy with effusion. So I used it in five cases of seborrheic eczema that had resisted all of the many used forms of external and internal treatment. I usually withdrew 10 cc. of

*Read before the St. Louis Physicians Club, April, 1915.

Digitized by Google

blood from the arm into a sterile test tube, and immediately defibrinated it, then centrifuged it, and, without filtering, placed it in an ice box for 24 hours, after which it was filtered through gauze, through which a few blood corpuscles probably passed 1 cc. of this serum was then injected subcutaneously in the forearm. After 24 hours no change could be noticed; after 48 hours the eczematous areas were much paler, after 72 hours there was a decided paleness, and after five days the skin appeared entirely normal though the patient still complained of some itching; after ten days to two weeks the itching ceased. These experiments in seborrheic eczema have been uniform in result, no matter whether the condition existed in the ear, on the hands, face or body, extremities or scalp. I then used the same treatment in three cases of psoriasis, using the method advocated by Fox, as far as carrying out the use of chrysarobin; however I used less serum and not on the same day the blood was taken. In these three cases of psoriasis one on the scalp cleared up in three days, the other two in ten days. About a month ago I saw a case of syphilis which had been given three intravenous injections of salvarsan and which since the injections, developed a papular eruption, of a strawberry red color, over the entire body. This case was given 2 cc. of his own serum as given in other cases, and the eruption disappeared in five days, and has not returned. The only theory that I present for this phenomenon, is that most all diseases have a natural tendency to create within the body antibodies, through which immunity is acquired in varying degrees; in some apparently for life, others for a period varying from a few years to many years. It is when these antibodies exist in sufficient numbers or strength that this variation of the degree of immunity can be attributed. However, in those diseases in which the antibodies do not exist in sufficient strength or numbers to give proper resistance, it is in these diseases that we find the patients chronics, or possibly suffering from some form of anaphylaxis. I apply this espccially to skin diseases. I believe that in the serum of these cases lies the particular element that is necessary to start within the system a change in which there will be an increase in the formation of antibodies of sufficient strength and numbers to bring about the necessary changes which will result in a cure of eczema, psoriasis and numerous other exudative skin lesions, the same as we experienced in cases of pleurisy with effusion. I have no hesitancy in saying that in spinal injections of salvarsanized serum the most important element introduced is the serum and not the small amount of salvarsan that might have been in the serum. It might be well to subject some of these cases to spinal serum injection prior to taking salvarsan to determine which is the better.

714 Century Building.

HEALTH AS RELATED TO MENTAL EFFICIENCY.

L. HERBERT LANIER, M. D.

TEXARKANA, ARK-TEX.

In a study of health as related to efficiency to grasp the magnitude of its meaning we have to go back in history to the dawn of creation to learn that every sacrifice for progress, every struggle for freedom, every conflict, and every achievement, had for its guiding star the preservation of the health of the nation. Health is the greatest fact in history and when we cease to observe the unchangeable laws of hygiene and sanitary science, then we shall witness the inevitable doom of the republic.

The same conditions that caused the fall of Persia, Egypt and the Roman Empire are today retarding progress and a higher civilization in Africa, China, India, Mexico and other countries, and this, upon general analysis, is due to the defiance of the laws of God, hygiene and health; hence it is that we witness the whole world today interested in the first law of nature, "self-preservation." Nothing more interesting, more absorbing and more inspiring was ever written than the health maxims of Hippocrates, the great father of medicine, who first taught the importance of preventing, rather than curing disease.

I shall invite your attention to the fact that hygiene and sanitary science correctly applied have made possible the construction of the Panama Canal, the greatest engineering feat ever recorded in the annals of history; yet for 400 years previous to the time the United States acquired Panama it had been considered the most unhealthful spot in the world, the hottest, wettest and most unsanitary region on the face of the world. How different we find it today, quite as free from disease as is the southern part of the United States.

Each civilized nation figures that every healthy citizen increases its assets and each places a stipulated valuation on such, while it places a small estimate on the worth of

Digitized by Google

individuals with physical imperfections, though they be not sufficient to incapacitate them for all work. Degenerates, mental and moral perverts, the blind, the deaf, the dumb, the paralyzed and confirmed invalids are placed on the liability ledger and considered a charge on the state and government.

The most prevalent disease in America today, especially regarding its influence on mental efficiency, is neurasthenia, or nerve prostration. It is rarely recognized in its early stages, it is a condition in which the nerve and brain cells are in a state of pathological fatigue and unable to perform their functions with any degree of unison and harmony. It may result from various chronic diseases, mental worry or emotion; overwork, a neurotic temperament, alcoholism and the tobacco habit are contributing causes and, according to Jackson, "When the expenditure of nerve force is greater than the daily income, physical bankruptcy sooner or later results." Other potent causes, though less easily dealt with, are the worries attendant upon love affairs, religious beliefs and doubts, and domestic troubles.

Heredity plays an important part in the production of neurasthenia. We do not all start in life with the same amount of nerve capital. Parents who have led irrational lives, indulging in excesses of various kinds, or who have been subject to nervous complaints, or to mental trouble, may transmit to their children an organization which is defective, because of the absence of "nerve force." Such individuals start life handicapped, with a neuropathic predisposition, and furnish a considerable proportion of our neurasthenic population. As Van Geison puts it: "The potential energies of the higher constellations of their association centers have been squandered by their ancestors." Again, Osler reminds us that "so long as these individuals are content to transact a moderate business with their life capital, all may go well, but there is no reserve, and in the exigencies of modern life these small capitalists go under and come to us as bankrupts."

Because of the complexity of modern business life in America, neurasthenia is found, affecting more people in proportion to population in this country, than any other part of the word, truly confirming the trite old saying, "We are burning the candle at both ends."

A patient with neurasthenia feels his mental incompetency and is conscious of cerebral exhaustion and nervous unrest, and soon loses confidence in his ability to accomplish as much as he formerly did and finally does not try. There is no routine treatment for this condition, every case is a law unto itself, but there is a great deal in prevention and since the causes have been enumerated the prevention is at once suggested.

The perfect symmetry of form, broad shoulders, full round face, erect body, smooth features, sound and even teeth, shapely limbs—in all the marvelously fine physique of the ancient Greeks and Spartans furnishes a striking contrast to the physical aspect of a large proportion of the inhabitants of the world today; on every side we see round shoulders, weak lungs, hollow cheeks, sunken eyes, bald heads, decayed teeth, lean and distorted figures; all of which clearly demonstrates that the vital and inviolable laws of health have been disregarded and their "sins have surely found them out."

Malaria, an infectious disease conveyed by mosquitoes and found principally in southern Russia, Italy, India, Africa, South America, Mexico and in the southern part of the United States, has proven to be the chief obstacle to overcome in these places. Strenuous endeavors are being made to develop these countries to a health position parallel with that of Germany, England and the northern part of the United States.

Simultaneously with the foci of epidemics of malaria becoming more restricted in the countries mentioned, an unprecedented wave of developmental activity has swept over them, which has resulted in stable government and constructive legislation, the erection of schools, the education of the masses, profitable farming and, last but not least, hundreds of men of great intellectual attainment who rank among the world's best, in art, science, literature and commerce. What has caused the change? Simply screening the houses and the enforcement of hygienic and sanitary measures that limit the spread of a disease which saps the vitality and causes malaise and mental inertia. Malaria has been ten times more detrimental to the southern states, in arresting development, than was the civil war; but at last its rapidly disappearing because the laity now know how to combat it.

The superlative degree of mental and physical perfection which we should seek can only be obtained by returning to the "simple life", living as much as possible in the open air and by observing the unchangeable laws of hygiene and sanitary science, thereby developing a strong vigorous body, capable of enduring the demands

Digitized by Google

made upon it as a result of prolonged mental effort which each man must make to master his world problems.

The result of the eradication of malaria and other infectious diseases from those places where they have been most prevalent is obvious, better health means renewed vigor, it will engender the determination to succeed in life, it will lift the fog that clouds the vision and point the way to a higher plane of physical and mental possibilities.

The fountain head of the problem of conserving the health, that the greatest possible degree of mental efficiency may be attained, is to be found in the care and training of children, or we might go even farther and say, in eugenics, a solution of the problem is here offered, and, indeed, the whole world is studying eugenics and the proper care and training of children. This is resulting in a marvelous improvement in physical and mental accomplishments at given ages. May we not hope that each day will witness still greater interest in the subject of properly safeguarding the health of children and children yet to be born, that they may grow up strong and vigorous, to be valued and respected citizens, an honor to their parents and an asset to the state?

A child's future, its education, its livelihood, its appreciation and enjoyment of all the beauties of creation depends upon the preservation of its health, but in spite of this fact we see daily innocent little children sacrificed on the altar of ignorance and neglect. What school child, or adult if you please, can accomplish anything worth while when suffering from adenoids, enlarged tonsils, colds, catarrh or any other morbid condition which saps the vitality of its victim and clouds an otherwise healthy brain. Shall we allow children to grow up and become non-entities and social outcasts because they are physical wrecks? Many neglected diseases of the eye, ear, nose, throat and other organs predispose to mental and physical inertia, and may finally result in idiocy and degeneracy. The vital part played by the organs of special sense, in the conduct of human affairs is unquestionable.

The eyes are more frequently neglected than the other organs of special sense, many children are born blind or cross-eyed, and continue so because they are refused an operation that will straighten the eyes or restore their vision. Many children, victims of near sight, astigmatism or muscle anomalies can be benefited by glasses and can accomplish little without them. Among the symptoms of the various forms of eye trouble so noticeably benefited by glasses, but usually first otherwise attributed because they are of a reflex character are headache, ocular pains during the use of the eyes, heart burn and nausea. Some patients suffer from indigestion, nervous attacks, insomnia, accommodative and muscular athenopia, with gastric or nervous symptoms, irritable tempers, etc., the eye cause of which would be determined only by an oculist.

To consider all phases of this subject would require a voluminous paper, but we are chiefly concerned with the methods whereby the individual and public health may be conserved and intellectual progress continued.

How many physicians know that the majority of feeble-minded and insane people are so because of either alcoholism or ancestral abnormalities, yet this is a fact, and this state of affairs would be eventually eliminated from the calendar of future events by universal eugenic marriages and abstinence from intoxicating drinks. What an asset to the state and government, to have its inhabitants living normal lives, instead of witnessing the physical and mental degradation so conspicuous today.

The observance of a rigid hygiene and a strict sanitary code, by all the people, is the next most efficacious method of preventing disease, which in its myriad forms has proven the greatest enemy to civilization that the world has ever known.

231 State National Bank Building.

RETROSPECTIVE.

D. L. FIELD, M. D.
JEFFERSONVILLE, IND.

The practice of medicine, because of the inability of any one man to master all the knowledge of the present science, has developed a large number of "specialists." The old-time family physician—if there is such a thing in existence yet?—is almost extinguished. We send surgical cases to the surgeon; sore eyes to the oculist; uterine diseases to the gynecologist, and so on.

That there are specifics for any disease, is an idle dream; a figment of the imagination; and no man who is grounded in the fundamentals of the science, can promulgate such a doctrine, except from a sinister motive. The young students who sit at the feet of the modern "Gamaliels" of our colleges, can but see, and learn the fallacies of many dogmas that are rampant in the medical world today.

Digitized by Google

Medicine is not yet what it will be some day, and is not yet free from many absurdities which once characterized it. There are still vagaries, and entirely too much empiricism, even among those who should know better! The ignorance and superstition of the past are hard to remove. Among the most absurd vagaries, are the claims of "specific medication!" It is a relic of the most primitive days of medicine—revamped, and now paraded as an infallible dogma; and such specious arguments have now a considerable following. There can be no specific medication! Disease is not to be always treated per se; but each individual case must be determined from the standpoint of the patient himself. Yet it is not strange that the idea of "specifics" is one that takes hold of the popular mind; "that there is a specific remedy for every ailment, and that every symptom has its corresponding drug which is good for it? Perhaps, though, the more superficial the education of the practitioner, the stronger the faith in specific medication. While this is true, it is passing strange, that in the full blaze of the twentieth century, such a fallacy should exist. There was a time, when it may have been excusable, but there is absolutely no excuse for such a claim now. We are crowded with more fads, fancies, fallacies, and cruel humbug, now, than ever we were. It is "lo here and lo there." Any attempted exposure of such pretensions is futile.

With all the humbugs with which the practice of medicine has been as is yet, there has still been a steady progress and development in an honest endeavor to practice medicine scientifically and intelligently. It has not lagged behind in the march of progress. It has advanced in experimental research, manipulation and philosophic reasoning. Fifty years ago the science of medicine began to undergo a sort of revolution, which was the effect of experimental demonstration, by which new truths were brought forth, and erroneous theories relegated to oblivion. The time has come when no one is conceded the right to speak or write "ex cathedra," and no theories find favor, unless based upon solid and established facts.

It is stated that 5,000 criminals are detected annually in England by means of finger-prints. The system, which has been in use in India for some years, was introduced in England in 1900. In the far East a thumb mark is the royal sign manual.

SELECTED ARTICLE

CLINICAL LECTURE ON JAUNDICE.*

W. LANGDON BROWN M. D., F. R. C. P.

LONDON

Assistant Physician to St. Bartholomew's Hospital and Physician of the Metropolitan Hospital.

Jaundice is the classical example of a striking symptom of varying significance. At the outset it will be well to consider the natural history of the bile pigment, so as to appreciate more fully the effects of a departure from the normal course of events.

In all probability the red corpuscles are ordinarily broken down in the liver. Hematoporphyrin which is isomeric with bilirubin, is set free from the hemoglobin molecule. The bile pigments, bilirubin and the more exidized biliverdin, on leaving the liver, are stored up for a varying time in the gall bladder and are then discharged by the common bile duct into the intestine. In the intestine the bile pigments are reduced by bacterial action to stercobilin, the normal coloring matter of the feces. A certain amount of this is reabsorbed by the intestinal vessels and is excreted by the kidney as urobilin. Urobilin is not the chief pigment of the urine, which is urochrome, and most of the urobilin normally is further reduced to a chromogen. If urobilin is excreted as such it means either that (1) the destruction of red corpuscles is excessive, or (2) an excessive time is given for reabsorption, as in intestinal obstruction, or (3) there excessive reduction owing to an abnormal amount of intestinal putrefaction. If no bile pigment enters the intestine there can be no urobilin in the urine, and there is no satisfactory ground for stating, as is sometimes done, that urobilin in the urine is evidence of the existence of gallstones in the biliary passages.

Obstructive Jaundice.—In all forms of jaundice, except one, jaundice is due to obstruction somewhere in the biliary passages. Sometimes the obstruction is gross and obvious, affecting the main ducts; sometimes it is not obvious, and can only be demonstrated microscopically as catarrh of the smaller ducts. In the former group the obstruction may be within the lumen of the common duct (mucus from catarrh, gallstones, parasites), or in the walls of the duct (stricture, congenital atresia, new growth), or pressure on the duct from without (new growth in the head of the pancreas or in the lymphatic glands in the portal fissure).

Digitized by Google

It is important to observe that stones in the cystic duct do not cause jaundice, but the gall bladder becomes distended with clear mucoid fluid. Gallstones in the common duct, on the other hand, cause jaundice, but do not dilate the gall bladder. So that if there is jaundice with an enlarged gall bladder, gallstones ought not to be diagnosed, unless there is evidence of one stone impacted in the cystic and another in the common duct, a condition which must be very rare. Courvoisier long ago laid down the rule that if the common duct is obstructed by a gallstone the gall bladder does not enlarge, but if obstructed by something else, it does. We are now in a position to understand the reason for this. In the first place, gall-stones do not usually produce so complete an obstruction that no bile can leak past the obstruction. A clay-colored stool may contain stercobilin, though excess of fat in the stool may completely obscure that fact. Nevertheless, extraction of the stool with acid alcohol, or amyl alcohol, may show the presence of stercobilin, which may be recognized by the spectroscope or by the brilliant green fluorescence which it gives with zinc chloride and ammonia. In the second place, gallstones are associated with a pre-existing cholecystitis, and this may lead to so much thickening of the gall bladder with surrounding adhesions around that it cannot enlarge.

On the other hand, a new growth in the head of the pancreas usually obstructs the common duct so completely that no stercobilin can be extracted from the stools, while the gall bladder, not having been the seat of previous disease, can enlarge. The occurrence of painless, persistent and completely obstructive jaundice in an elderly person should raise the suspicion of new growth of the pancreas, particularly if the gall bladder enlarges. It is worth while noting also that in this condition the liver is seldom greatly enlarged by metastatic deposits as so commonly occurs in new growth of the rectum, stomach or elsewhere in the abdomen, although there may be a slight general plumpness of the liver from distension of the intrahepatic ducts with bile which cannot escape into the intestines.

The cases of jaundice without obvious obstruction gave rise to much controversy in the past. It was known that the hematoidin of old blood clots was chemically identical with bilirubin, and that any drug that broke down red corpuscles caused jaundice. The conclusion was naturally drawn that jaundice was hematogenous. But then it was found that if the liver were excluded from the circulation before the hemolytic drug was injected, hemoglobinuria resulted, instead of jaundice. Further observations showed that all the hemolytic drugs also excited a catarrh of the smaller bile ducts, a descending cholangitis obstructing them and leading to resorption of bile into the general circulation. Jaundice of toxemic origin, such as occurs in phosphorus poisoning, yellow fever and acute yellow atrophy of the liver, is similarly explained.

Acholuric Jaundice.—But soon after the theory that jaundice was always obstructive in origin seemed firmly established, a group of cases was recognized to which the discarded term "hematogenous" would fairly apply. To this group the name of "congenital family cholemia," or "acholuric jaundice" has been given. As the condition is a rare one, I need only say here that the patient may be born jaundiced or become so soon, after birth. Jaundice persists with little or no variation for many years. Bile pigment is present in the serum and in the stools, while it is absent from the urine. The spleen is always enlarged, and there is considerable anemia. Yet the patient has good or fair health and shows normal resistance to intercurrent diseases. The condition tends to appear in more than one member of the family, and in successive generations. The most striking pathological feature is the undue fragility of the red corpuscles, which are hemolysed by a dilute salt solution, which has no affect on ordinary corpuscles. We may conclude that there is a chronic hemolysis of unduly fragile corpuscles occurring so slowly that it does not excite catarrhal cholangitis but leading to pigmentation of the serum and tissues just like the yellow staining in old blood clots. It is not known how this pigment escapes from the body without affecting the urine.

The Results of Obstructive Jaundice.—We may next consider the effect on the body of the alterations in the course of the bile which follows an obstruction to the small intrahepatic ducts or the common bile duct.

Within two hours of the occurrence of an obstruction, the bile reaches the blood stream by way of the lymphatics and the thoracic duct. This is much sooner than it appears in the conjunctiva or skin. Bile salts in vitro are marked by hemolytic due to their solvent action on the fatty substances of the red corpuscles. And the serum of a jaundiced patient will readily hemolyse foreign corpuscles so that it may

Digitized by Google

be impossible to carry out Wasserman's test because hemolysis occurs in all the tubes. Yet jaundice is not typically accompanied by secondary anemia, for the patient's own red corpuscles acquire a heightened resistance to bile salts, which increases with the intensity of the jaundice. Herein it differs from acholuric family jaundice. Anemia, may, of course, result from the cause of the jaundice as in malignant disease of the liver, but it is not produced by the jaundice. One definite result of bile passing into the blood is slowing of the pulse. High tension usually accompanies a slow pulse, but, in the bradycardia of jaundice, the pressure is low and the pulse dicrotic. High tension stimulates the cardio-inhibtory centre in the medulla, and thus slows the heart through the vagus, but bile salts have a directly depressing effect upon the heart. Hence, the slow pulse with low blood-pressure. The action can easily be demonstrated by applying a 1 per cent solution of bile salts to the isolated heart of a frog.

Bile pigment appears in the urine soon after its appearance in the blood serum, and before it can be detected in the conjunctiva. Naturally, as jaundice clears up, the pigment disappears from the urine last. The best test is Gmelin's, the play of colors obtained on addition of fuming nitric acid, green being the most important tint to look for. Rosenbach's modification of dipping filter paper into the urine, and then placing the acid on the paper is the easiest way of doing the test. The green color given on pouring tincture of iodine on to the surface of the urine is not so sensitive a test. Bile salts may be found in the urine even before bile pigment. The only test of any value is Matthew Hay's. Flowers of sulphur poured on to the urine sink if bile salts are present, owing to reduction of surface tension. No other test is sensitive enough to recognize the small quantity of bile salt which may be found in urine. But the majority of cases of jaundice do not show any bile salts in the urine. It might be thought that, from their presence or absence, we could draw some conclusion as to the cause of the jaundice, but unfortunately this is not the case. The bile salts which normally enter the bowel are reabsorbed and used over again several times. Copeman's observations on biliary fistulae show that soon after the fistula has been established the salts in the bile fall to one-tenth of the normal amount, since reabsorption cannot occur now. This suggests that bile salts are secreted and reabsorbed approximately ten times under normal conditions.

Bile is partly an excretion, partly a secretion. The bile pigments, the mucin and the cholesterol, are excretory in character, while the bile salts have a secretory value. This combination of an excretion which has to be continuous with a secretion which is only required during digestion is effected by the gall bladder. The clay-colored stool of jaundice, as already explained, may contain some bile pigment, but the return of normal pigment to the stool is evidence of the cessation of obstruction to the bile duct. Bile precipitates undigested protein and, in some way, accelerates the digestion of starch. But its main digestive value is in connection with the fats. Bile salts permit of closer contact between the watery digestive juices and oily fluids by lowering surface tension, while lecithin and cholesterol help to dissolve fatty acids and soaps, including the otherwise insoluble calcium and magnesium salts. Even in acid media the action continues because the bile acids, which are now set free, can dissolve fatty acids. Bile salts also play an important part in promoting the absorption of fat by lowering surface tension. We can therefore determine in a case of fatty stools whether the pancreatic juice or the bile is at fault. In normal feces, the saponified and unsaponified fats are approximately equal in amount. Pancreatic juice effects the splitting of fats which must precede saponification, so that, if the excess of fat is due to a pancreatic defect, neutral or unsaponified fat will be in excess of the split fat. On the other hand, bile salts provide for the absorption of the fat already digested by the pancreatic juice, so that, when the excess of fat in the stools is due to loss of bile, the split fats will be in excess because they cannot be adequately absorbed.

It is due to this difficulty in absorption of fat that jaundice is so commonly associated with wasting even when the jaundice is not due to a wasting disease like carcinoma. Theoretically, it should be possible to correct this by liberal diet of proteins and carbohydrates which can be digested and absorbed in the absence of bile. Practically, however, the reflex digestive disturbances which so frequently accompany jaundice make this difficult and consequently the patient is compelled to consume his tissue fat.

Bile is a natural laxative, as the bile salts stimulate peristalsis. Jaundice is, therefore, apt to be accompanied by constipation. It is claimed that bile is antiseptic in its action, and it is certain that, in its absence from the bowel, there is excessive putrefaction as evinced by the rise in the

Digitized by Google

ethereal sulphates of the urine. But, though free bile acids are antiseptic, bile salts are not; one has only to keep some bile for a few days to realize that it cannot keep itself from putrefying, and so can hardly be an efficient antiseptic for other substances. The explanation is that, in the absence of bile salts, the fats are absorbed so badly that they coat over the proteins, which therefore undergo excessive bacterial decomposition instead of being quickly assimilated. But the peculiar odor of the stools in jaundice is largely due to the higher fatty acids.

Hyperchlorhydria is a common accompaniment of jaundice. If the jaundice is secondary to a gastro-duodenal catarrh, however, this is not present, as catarrhal gastritis diminishes the secretion of hydrochloric acid. Probably the hyperchlorhydria is usually caused by delay in the escape of the gastric contents, the pyloric sphincter undergoing a protective spasm. The hyperchlorhydria, is therefore, likely to be most obvious in jaundice associated with pain as in gallstones or pancreatic disease where there is inadequate neutralization of the hydrochloric acid of the gastric juice by the alkaline pancreatic juice.

I believe that we have here an explanation of the success which followed treatment of gallstones by olive oil. It was formerly thought that olive oil would dissolve gallstones. It is true that a gallstone placed in olive oil will crumble, but it is not obvious how olive oil could ascend the bile duct. Further, it was urged that patients passed fatty concretions after this treatment, but so would anyone on such large doses of olive oil. For these concretions are nothing more nor less than calcium and magnesium soaps formed by it in the bowel. But one generally finds that a treatment which has had a large vogue has some empirically sound basis, even though the reasons or its advocacy may have been incorrect. Olive oil probably diminished the discomfort of patients with gallstones, because it reflexly inhibited the secretion of gastric juice and thus checked hyperchlorhydria. But we can do this in other ways which will not have the fattening effect of the oil—an effect which is undesirable in the subjects of gallstones, who are so frequently stout.

Soon after the bile has ceased to enter the intestine properly and has entered the urine, some of it will reach the conjunctiva and then the skin. It is well known that the lemon tint of pernicious anemia can be readily distinguished from slight jaundice by the fact that the conjunctiva is not yellow, but pearly white. In chronic jaundice, flat noducles of xanthelasma are not uncommon, and telangiectases are apt to form. Pruritus is a most troublesome symptom, but it is inconstant; it bears no definite relation to the duration or severity of the jaundice. It is to the bile salts in the circulation that pruritus is to be attributed. The patient indulges in much scratching, but without relief for, as he often says, the itching is beneath the skin.

Various statements have been made about the different secretions being stained in jaundice. I believe the truth is that normal secretions are never stained by bile, but that inflammatory and passive exudates are invariably bile-stained. Thus, if mastitis occurs in jaundice, the milk will be colored with bile. Nasal and bronchial mucus is not tinged with bile, but, if pneumonia occurs as a complication, bile at once appears in the sputum. Again, should edema of the lungs ensue, the sputum becomes bile-stained. In jaundice without pneumonia then, the occurrence of bile-stained sputum is of serious import, being evidence of heart failure. Fluid in the pleural or abdominal cavity being either the result of inflammation or of passive exudation will, accordingly, be colored by bile in a jaundiced patient.

A mild degree of poisoning of the nervous system by bile salts is common in jaundice, causing headache and depression. Bile pigments and bile salts are generally found in the cerebrospinal fluid removed by lumbar puncture. Any severe toxemic jaundice will be accompanied by marked nervous symptoms—headache, delirium and ultimately coma. But this is due to the hepatic inadequacy caused by the action of toxins on the liver, and not to the jaundice. Indeed bile salts are probably not produced in this condition, the liver being too damaged to elaborate them.

It will be observed that, apart from an unpleasant but harmlesss discoloration produced by bile pigments, all the important symptoms in jaundice are due to bile salts. Their absence from the intestine causes steatorrhea and wasting, from deficient absorption of fats, increased intestinal putrefaction and constipation. Their presence in the blood causes bradycardia, headache, depression and pruritus.

Treatment.—It is clear that a symptom depending on so many different causes cannot be treated without reference to the cause in each case. Nevertheless it is true that certain general rules are common to all cases of jaundice. Milk is usually recom-

Digitized by Google

mended as the mainstay in diet, but owing to its comparative richness in fat, it is not really suitable and is often much disliked by the patient. I prefer to give barley water flavored with lemon, with the addition of the white of an egg and a teaspoonful of somatose or plasmon to each half pint. Tea is usually forbidden, but it is difficult to see on what grounds. Jaundiced patients often crave for it, and, if made in the Russian fashion, without milk but with a slice of lemon, it seems free from objection. If the practitioner feels reluctant to abandon milk, it should be separated or thoroughly skimmed to get rid of as much fat as possible, and then a grain of sodium citrate to each ounce of milk to diminish curdling. Benger's food, calves' foot jelly and lemon sponge are pleasant and can usually be taken without difficulty. One advantage of gelatine is that it does not contain the groups which give rise to putrefactive bodies. Water should be drunk freely to prevent inspissation of the bile. Patients do not care to be told to drink water from the tap, preferring, as of old, the waters of Abana and Pharpar. It is well, therefore, to select a spring which is alkaline, such as Vichy, St. Galmier or Evian.

For the vomiting at the outset of catarrhal jaundice, I think there are few things better than ½ grain doses of calomel every hour until 3 grains have been taken. It acts as an aperient, an antiseptic and an indirect cholagogue. Indeed, nearly all cholagogues are indirect, acting as stimulants to the bowel, and therefore to the adjacent bile passages. The only direct cholagogues are salicylates, bile salts and secretin. The last is not absorbed from the bowels, but has to be manufactured within the intestinal mucosa. Bile salts should not be given as long as an obstruction to the bile ducts exists, or they will increase the discomfort which their presence in the circulation is already producing. Salicylates on the other hand, are useful as a dilutent of bile. They may be combined with alkalies which help to dissolve any mucus at the orifice of the common bile duct. When gall-stones are present I have found the addition of ten minims of tincture of belladonna very useful, as it dilates the bile ducts and facilitates the onward passage of the stone. The mixture should be given every four hours.

For the relief of pruritus I have found nothing so good as thyroid extract. It apparently diminishes the production of bile salts by the liver. The converse has been assumed, i.e., that bile salts diminish the secretion of the thyroid gland, but there is no proof of this antagonism. On this view bile salts have been given subcutaneously in the treatment of Graves's disease. That bile salts can slow the pulse and thereby relieve one symptom of Graves's disease we know, but they do this by depressing the heart, which is undesirable. One preparation used for this purpose, paratoxin by name, seems capricious in its action, even in this respect, and altogether the treatment is passing out of favor. For the reasons already stated local applications are usually ineffective for the relief of pruritus. A lotion of a drachm of creolin and an ounce of glycerine made up of ten ounces with water may be tried, or an ointment consisting of 20 grains of camphor and 30 grains of menthol in an ounce of vaseline.

In conclusion, except in the acholuric type, jaundice is always obstructive, though the obstruction may only involve the small intrahepatic bile ducts. We have traced the effect on the body of the altered course of the bile which follows such obstruction, and have laid down certain general principles of treatment common in all cases of jaundice. Treatment, however, can only be complete and satisfactory when the cause of the jaundice has been determined.

Your wife ought to be and probably is ready to help you about your business, but don't, on that account, try to unload its anxieties upon her shoulders.

Medicinal Plants in Germany.— The Muenchner medizinische Wochenschrift states that the minister of the interior has appealed to the apothecaries to stimulate the collecting and drying of medicinal plants and parts of plants in their districts. They can then prepare them for medicinal use, each in his own laboratory or by exchanging them with others. He explains that large amounts of the plant drugs used in making medicines have always hitherto been imported from other countries for this purpose. The war has rendered it very difficult to import them now or has shut off the supply completely. A list of plants useful for the purpose is given, including the flowers of arnica, chamomile, linden, elder and mallow, and the leaves of digitalis, walnut, belladonna, colt's-foot, henbane, stramony and the buckbean and various herbs and berries. Children can be taught to collect them, and also the elderly and the otherwise incapacitated, so that there need be no difficulty in collecting an adequate supply.

Digitized by Google

THE MEDICAL FORTNIGHTLY

and LABORATORY NEWS

THOMAS A. HOPKINS, M. D, Editor

EDITORIAL ASSOCIATES:
DR. R. B. H. GRADWOHL, St. Louis
DR. O. E. LADEMANN, Milwaukee

Editorial Rooms, Suite 714-717 Century Building, St Louis, Mo.

EDITORIAL

Extra-Professional Consultations.

Without infringing on personal conversations, a physician may frequently recall vital suggestions occurring in the course of remarks by a patient. No one more frequently than us receives so many general questions, and in the published accounts of medical men it is more surprising to find so little reference to the conversations which we hold with patients in which their views are clearly expressed, or pointed queries offered, enlightening in affairs of general interest. To us the butcher, the baker and the candlestick maker tell salient facts. They express views on financial situations. The mill-worker complains of having to clean his machine on Saturday on time of his own, and both unpaid for and unchecked. The plumber says, "all of us have to drink." The train-hand talks of thirty-six-hour shifts. Some of this is true, some false. But we are the most confidential, and to us comes much of the world's event earliest.

T.H.E.

The Management of Burns.*

A. Ravogli, Cincinnati, says that to establish a line of management of all burns a priori would be somewhat preposterous. Following the doctrines of Hebra and accepting his division into three degrees, the pathologic process in each is different. In the first two there is inflammatory reaction of the skin, in the third degree there is primary necrosis. The degree of the burn, the medium producing it, the depth of the injury, the extent of the skin burned, and the condition of the nervous system of the patient all influence the treatment. In general, we can say the best treatment is that which favors the sloughing of the burned skin, which maintains the sterility of the resulting wound, and promotes granulation and the newly forming epidermis. The burn is always serious from the resulting shock and the action of poisonous substances arising from the burned skin. The treatment of the local lesion is only a part of that which is necessary; the general systemic effects have also to be taken into account. In severe burns the pain is intense, but after the burn is dressed and an injection of morphin is given, one-fourth grain, quiet is produced and some patients are able to give details of the accident. After a severe burn the patients do not usually void urine, and if they do it is scanty and contains either blood or albumin. Sometimes even an apparently light burn may be dangerous to life. Removing the burned skin and deep blisters is risky and useless, as is also the washing with benzin or gasoline. Time is necessary to give the burned tissues a chance to slough off, and even in second degree burns it is better to puncture the large blisters to let out the serum, leaving the old skin to protect the denuded papillae of the derma. A few hours after the burn fever occurs, and when the burned tissues begin to slough off it shows the general systemic reaction. In the third degree burn the skin has been disorganized, and there is mortification of the tissues. The poisonous elements are formed in the skin and may be excreted by the urine, and this becomes poisonous. It is our duty to help Nature remove the burned tissue. An inflammatory process starts around the eschar with a groove separating it from the healthy tissues. The suppuration is effected in from eight to twelve days and the resulting granulating wound is left with an irregular depth. Healing progresses from the periphery and from islands of epithelium. Several illustrations are given to show these processes. In the first degree burn the application of dry powders, such as talcum powder, bismuth or alum, is advised. In case of severe pain, Ravogli recommends application of compresses, moistened with a solution of aluminum acetate, 2 to 5 per cent, and in second degree burns he applies the same. When the blisters are distended with serum he drains off the fluid by puncture. Oily substances, such as carron oil, etc., must be avoided as possibly aiding infection. When shreds of epidermis are easily detached, they are cut off with scissors and a thumb forceps. The Sneve treatment exposing the surface to plain air for a hour at first, and later two or three hours, is very useful.

*Journal A. M. A., July 24, 1915.

Digitized by Google

The treatment for a third degree burn is nearly the same. Recovery is obtained through cicatrization. The plain air and sunlight stimulates the granulating surface. It must not be forgotten that the granulations need to be touched with a solution of silver nitrate every other day to prevent irregular or keloidal scar. After exposure for from two or three hours the wound must be covered with a suitable dressing like a 2 per cent borated petrolatum on English lint. When the granulations are pale and show a tendency to pus formation, the application of a mixture of castor oil and Peruvian balsam aiso gives good results. It cannot be continued over a long time on account of its producing irritation. In burned areas of large size without tendency to epidermis formation, a few Reverdin epidermic grafts will help. Any extensive burn of whatever degree has a systemic reaction. In the beginning the patient may suffer from shock, though in Ravogli's experience this has been rare. More often he has seen gastroduodenal ulceration with continuous vomiting and sometimes nephritis and pneumonia. The fever following the burn rises and falls somewhat like that of typhoid. In all his cases the administration of chinin has been very useful, and he considers it one of the best antiseptics. In nephritis the intravenous injection of Fisher's solution with the internal administration of digitalis has been very helpful, and in a few days the urine was clear of albumin. Gradually as the patient improves, when the fever is gone, a substantial diet with some iron tonic preparation to improve the general condition of the patient must be given.

What has Organized Labor Done for Medical Science?

Such a topic is too wide for a mere editorial, or expression of opinion. We venture to suggest the title as provocative of thought. As a fact, labor rarely, through its societies, organizes hospitals — that it leaves to the churches. Contract medical practice, however, is the peculiar institution of the lodge and of the mining company. The latter, on the other hand, usually provides a hospital or dispensary, with some facilities. The lodge expects its doctor to carry medicines for free dispensing, many times. The attitude of labor, in these developing hours, requires our study. To contemplate where we will terminate if labor succeeds in dictating us the terms of earning our livelihood, is not of the pleasantest. Some initiative, on the part of labor, officially, through Mr. Gompers, or such as he, toward the aid of science and its workers, would lend light to a difficult situation. A scholarship might be endowed. T.H.E.

IN MEMORIAM.

Dr. Samuel H. Melcher, late of Springfield, Illinois, and Missouri.

AN APPRECIATION.

Dr. S. H. Melcher (Lieut.-Col.) an account of whose death was lately recorded, as a veteran hero of Wilson Creek battle of the Civil War after Lyon was killed, was very close to the undersigned in friendly and official relations. He was my senior in service at the U. S. Marine (Military) Hospital below St. Louis (in the early part of the Civil War) and my predecessor in charge of the Hickory Street (St. Louis) Hospital, the McDowell Prison Hospital, Hickory Street Hospital and Schofield Barracks.

I knew him well for nearly four years in the service both as assistant surgeon and as his official successor. His executive and surgical ability were equal to the best in the service, and is patriotism and courage were unbounded. His conduct on the field of that forlorn hope defensive in rallying the convalescents and nurses and demoralized stragglers to efficient resistance, won the applause of all who were interested in that disastrous fight where General Lyon fell.

Later, Dr. Melcher was at the head of the Board of Military Examiners for Missouri State troops and served in this capacity with the same ability he displayed in the field. In fact he filled all the requirements of his position with commendable ability and patriotism. I was much indebted to him for valuable example and precept in service and practice. He was the kind of medical officer that always serves efficiently and wins deserved promotion. He was brevetted Lietenant-Colonel for efficiency and bravery in service.

Respectfully,

Chas. H. Hughes,

Late Major and Surgeon and Medical Chief of Hickory Street Hospitals and Schofield Barracks during the Civil War, St. Louis, Mo.

Some of the biggest successes of this country have been made by men who grasped the opportunity to advertise when their opponents stopped.

Digitized by Google

WHAT THE MEDICAL EDITORS ARE SAYING

The Harrison Narcotic Law.--The Harrison law has now been in force sufficiently long to enable us to study some of its effects and defects.

Like many of our laws, even national, it seems to have been passed without sufficient intelligent preparation, or a forecast of sufficient scope as to its early results. In consequence, it will probably have to be amended and re-amended before it can work with satisfactory smoothness. Already various decisions as to the interpretation of some of its clauses have led to changes in the rules made for the enforcement of the law. So much so that recently, in this city, prescription clerks were going around having physicians put in proper shape recipes containing novocain, which at first was not supposed to be included in the workings of the law.

As usual, there is discrimination against the physician and in favor of nostrums. A new ruling makes it necessary for the physician to keep a record of each administration of a drug included in the law when given to a patient at his office, although the law excepts doses administered when in actual attendance upon the patient. This new ruling would make it appear that the doctor is not in actual attendance upon the patient when he treats him at his office, which not only is nonsense, but could easily be circumvented by the dishonest practitioner who could take the patient to another room, a hotel, etc., if his use of the drug was not legitimate. On the other hand, preparations can be sold over the counter if they contain less than a certain proportion of a habit-forming drug, and a prescription may be refilled if it contains less than that percentage, both of which things are pernicious and could, in time, nullify to a great extent the provisions of the law. Some of the worst cases of drug habit have had their origin in the use of cough medicines containing small doses of heroin, and of tonics with small doses of coca or cocaine. The amount of the drug should not cut any figure in the matter, as there is no provision made or possible to regulate the quantity of the preparation anyone may consume.

An encouraging sign of the favorable effect of the law is the report by some drug jobbers that sales of narcotics have fallen off about one-third since the law has been in force. This is all the more noteworthy because of the increased demand for export, owing to the war in Europe, which must first be offset before a decrease can be noted. Taking this into account and making allowance for the continued legitimate use of the drugs, it would seem conservative to estimate that the enforcement of the Harrison law has already resulted in a reduction by one-half of the illegitimate use of habit-forming drugs.

A further illustration of the ultimate good effect of the law is furnished by the serious problem presented by one of its immediate results. The army of habitues who can no longer get their accustomed dope and yet have no means to obtain treatment for their habit, constitutes a difficulty, and a very serious one in this and other communities without unlimited means for such purposes. Evidently this phase of the question was not thought of or then was ignored by the framers of the law. Some provision should have been made for these unfortunates who, at this moment, are not responsible for their condition and should not be treated merely as criminals, and especially not inhumanly as such.

A great deal more could be written in the same strain, not for the purpose of criticising or of finding flaws, but to call attention to the necessity for the further study and amelioration of the law. Lack of space forbids. The above, we hope, will suffice to show that the earnest and honest physicians must actively co-operate with government officials in the intelligent study and enforcement of the law; also that the government must exercise good judgment and fairness in its interpretation of the new legislation.—N. O. Med. and Surg. Jour.

Vaccines in Therapeutics.—Much has been said and written in recent years concerning the place of bacterial emulsions, or vaccines, in therapeutics. At first loudly lauded as of wonderful efficacy in a very extensive series of diseases, they proved to be frequently disappointing, particularly in the hands of the unskilled, and accordingly lost much of their first repute. More recently, a rather conservative attitude and a more exact method of application has proved that in certain cases their use is followed by results much superior to anything that is possible where they are not employed. The theoretical reasons for their action are based upon the most scientific grounds. Determination of the opsonic index, while yielding much valuable information to the trained observer, is uncertain in the hands of others, is no longer re-

Digitized by Google

garded as necessary, and is entirely too cumbersome for practical clinical work.

In the field of therapy, vaccines are, of course, limited to diseases of an infectious origin. Among such diseases, the greatest success is to be looked for in those due to infection by the staphylococcus. This is particularly true of long-continued cases of skin infection, which usually fail entirely to respond to any other form of treatment. Here vaccines seem to be as nearly specific as one can ask, and by unanimous consent this is now considered to be the most satisfactory therapeutic means to employ. In various forms of staphylococcic infection, such as abscesses, septic wounds, otitis, peritonitis, and sometimes septicemia, very gratifying results have been obtained, including even a number of skin diseases characterized by the formation of pus.

In streptococcic infections the greatest care must be given to the preparation of the vaccines, a polyvalent vaccine being used, and one where the virulence of the micro-organism has not been unduly increased by artificial manipulation. Streptococci produce so many severe infections that anything offering hope is heartily welcomed. And certainly many of the results following the use of streptococcic vaccine have been most brilliant. In erysipelas, carbuncles, septicemia (especially of the puerperal type), infections of variously localized part, and even in a few cases of pyemia, vaccines have been satisfactorily used.

With these severe infections the physicians most experienced in the administration of the treatment will obtain far better results than all others, as much depends upon personal observation and careful gradation of the treatment. The almost protean manifestation of the colon bacillus are frequently much helped by vaccines, and at other times no effects are seen. Colon cystitis, pyelitis and peritonitis seem to present the most hopeful cases. Gonococcus vaccine, in arthritis, and in some of the remote sequelae of the disease, is of established value; but in the acute manifestations it has not proven of much use.

Prophylactic injections of typhoid vaccine are among the most important of our recent preventive measures against epidemics, while, in the hands of some, they have yielded very satisfactory results in a purely therapeutic sense. The specific treatment of pneumonia must for the present be left sub judice, with the evidence apparently in favor of its value. Tuberculin treatment of tuberculosis has undoubtedly made a safe position for itself, both for the pulmonary and the other forms of the disease. Judgment concerning the individual case is essential, as well as selection of the proper size and gradation of the dose. In mixed pulmonary infections the judicious use of the various vaccines, and especially of autogenous vaccines, has frequently been followed by excellent results, while even in advanced and hopeless cases many of the troublesome symptoms have been greatly alleviated.

In short, vaccine therapy, as now used by our best men, offers much in the treatment of certain conditions that cannot be reached by any other measures. Its field of usefulness, while very evident, is as yet without distinct borders, and will probably steadily increase in extent as our knowledge of its underlying principles becomes more thorough.—Medical Brief.

A Scientific Study of a Nation's Food Supply.—Among the many interesting and important social problems which have arisen among the warring countries of Europe and which have been scientifically studied by experts and political economists, one which stands out conspicuously for its vital importance, relates to the production and conservation of the food supply of a nation which is more or less dependent upon its imports for some of the food necessities of life. The most elaborate study of this subject which we have seen, perhaps the most exhaustive one which has ever been made, appears in a pamphlet by Dr. Paul Eltzbacher of Berlin, translated in the London Lancet (Feb. 20, 1915). The study was stimulated because of the plan of the allied nations to attempt the starvation of Germany by blockade, so that she could obtain no food from the outside world, and the first chapter of the pamphlet has the suggestive title: The Problem for an Isolated Political Economy. The question of the actual food requirements of the German people, necessary to sustain life and to maintain health, is set forth in the most minute detail, first as to the requirement in calories and then as to the proteid requirements, which is separately estimated as it forms the building material of the body and cannot be replaced by any other foodstuff. The enormous food deficit resulting from the exclusion of foreign products is carefully estimated and methods are outlined for covering this deficit by various domestic and national economies. The subject of intensive and diversified agriculture is studied with a wealth of information which is most illuminating and much attention is given to the importance of regulating the

Digitized by Google

amount of live stock in the country, so that there will not be an over-consumption by beasts of food material which is needed for the people. A most important part of this study, and one from which the people of all countries may gain many useful lessons in economy, relates to the proper utilization of agricultural products of all sorts. A chapter which is most helpful relates to the subject of household economy and we feel that every housewife in this wasteful and extravagant nation of ours might profitably read this chapter. Here it is shown that by the scientific and intelligent use of foodstuffs, not only may an enormous amount of waste be eliminated but a much less monotonous and a much more varied diet may be very economically provided. The author, or rather authors of this pamphlet, for it is the result of the studies of several, come to the conclusion that it is perfectly possible for Germany to subsist indefinitely upon her own resources, should she be obliged to do so, provided these resources are husbanded and utilized in the manner indicated. Theoretically this may be so, and practically we believe that it might become so, as the result of a good many years of national education along the line of scientific food economy. The necessary alteration in the habits of life of the people, however, which would be entailed by a strict adherence to the practices and principles laid down in this pamphlet are so many and so radical that they could hardly be brought about suddenly and we doubt very much whether under present conditions the German nation could survive very long as a closed economic area. We heartily recommend the perusal and study of this pamphlet, which we consider a classic, to everyone interested in political or domestic economy; it would not be possible to find so much detailed information regarding the subject of the food supply of a nation in any single publication that we know of.—St. Paul Med. Jour.

In the campaign against malaria in the South Surgeon Rudolph H. von Ezdorf, U. S.P.H.S., from his headquarters at Mobile has sent out cards to physicians all over the malarial territory asking for information as to the prevalence of the disease. The idea is to get accurate information as to the incidence of the disease and its geographic distribution. Negative as well as positive replies are desired. It is the intention to collect information on the malarial situation by sending out cards each month.

THE MONTH'S MAGAZINES

When a Woman Reaches Fifty.—Being not so young as you were is not all loss. If maturity of years is an ailment, then youth is another. To be fifty years old is to have made a fairly complete recovery from the ailment of youth, and that is no small achievement. It is not everybody that does it. The person who remembers statistics will tell you what proportion of us struggling people succumb to youth and its mischances and hardships. It is a large proportion. The rapids of the river of life, the rockiest places, the swiftest descents, are apt to be up-stream. To have passed them all and got down into the calmer levels of the fifties is a feat that justifies a good many comfortable thoughts Yes, it is; especially if one is not too much stove in by arduous preliminaries and has been able perhaps to bring down some cargo with him. It is, or used to be, a fashion to sigh for lost youth, and there are people who do sincerely mourn for it. Women, especially, who have had full measure of youthful beauty, part with it, usually, with signs and reluctance. Gray hair seldom pleases them; they don't like wigs; the "ravages of time" are real and sad to them, and they repair them with diligence and what skill they may command. Beauty in a woman is a power. To be noticed and admired and courted for it is, no doubt, a very considerable stimulation and entertainment not to be indifferently parted with, and not in all cases offset by gains in authority, or the tribute of deference and gentleness and power of sympathy. What a woman loses by the years in freshness of physical beauty she ought more than to make up in wisdom that comes from living, in the fuller understanding of people and of life, in all the kinds of knowledge, in self-possession and increased skill in the arrangement and discharge of the parts of speech. So it does happen with able women who have had a chance to develop and who have lived good lives. They are vastly more interesting at fifty than at twenty-two, and many of them are lovelier to look at. But beauty comes ready-made, and these mature attractions have to be earned, and not all women earn them.—E. S. Martin in Harper's Magazine for September.

Where Education Fails.—All over the country, at ever-increasing cost, we are constructing splendid buildings for the service of primary and higher instruction of all the

Digitized by Google

children and young men and women. We are training teachers from the scholastic standpoint, and are trying to make the schools serve in a better way the individual preparation for industry, commerce, and agriculture. But we are almost wholly failing to utilize the educational system for the specific training of citizens in their various duties as such. The consequence is that the standards and methods of our political and organized life are lower than those of our private life. There is perfect consistency between the ideals of those who glorify peace, and the aims of those who would train every American boy to be ready to help maintain peace in any time of emergency or danger. We are not getting anything like the social and public values that we ought to be reaping from our investment in schools and education. Scholarship is not popular in our universities and colleges. Athletic life furnishes no proper outlet, because it is vicarious and quasi-professional. A few young gladiators monopolize the athletic activity of our institutions, and the vast majority are taught to look on and yell for the maintenance of college or school spirit. Thus our great institutions, though more and more costly in their appointments and maintenance, are painfully aware that they are not producing the results that ought to be manifest. Many of their students—a possible majority—cannot write a well-phrased or correctly spelled letter. They do not know the Bible, or Shakespeare, or Charles Dickens. They are not capable of reading the editorial page of a good newspaper. This criticism does not apply to all, but to what in at least a good many large institutions must include fully half of the undergraduates. It would be unjust to locate blame in any specific quarter. The faults lie deep in our current life, and are widespread. There are great resources of worth and of power latent in those very youths who do not find themselves absorbed in the study of text books, or held to discipline by the sternness of the football coach. But there is a gospel of social and public duty, accompanied by certain practical applications, that might be used to bring out the earnestness and personal worth of thousands of these young men. They should be strongly impressed with the gravity of the issues of this momentous time in which we live. Without much if any additional burden to the taxpayers, every one of these students of high schools, normal schools, colleges, and universities could be so taught and trained as to be well prepared to exercise many of the usual, and some of the unusual, duties of citizenship. Such training would benefit students in their health and morals, would give them a finer sense of private as well as of public duty, and would furnish them with various kinds of practical experience and knowledge that would redound to the welfare of our political and governmental life. —From "The Progress of the World," in the American Review of Reviews for September.

Change in India. —A good deal has been heard lately about the troubles brewing under the surface of English rule in India. But meanwhile a silent revolution, social, religious, educational, is taking place in the Indian mind itself. This is the subject of an article entitled "The New Heart of Old India," in the September Century, the work of Basanta Koomar Roy, author of the recent study of Rabindranath Tagore. Fundamental are the changes noted by the author, himself an Indian Liberal; the rapid breaking-up of the caste system, the abolishing of the early marriage, which has so terribly undermined the physical stamina of the race, marriage between castes, the re-marriage of widowed girls, the spread of manual training among the pariah class, the universal spread of one dominant language, and the growth of education among women. All this in spite of the reactionaries who, it is amusing to learn, have just established a line of steamships to England on which all the amenities of caste are to be rigidly upheld and who are on the point of erecting a hotel in London, so that strict Hindoos can travel without compromising their position.

Typhus Checked.—The American vice consul at Belgrade cabled, July 22, that the typhus epidemic in Serbia and Montenegro is under control, and that an appropriation of $10,000 for use in Serbia will be ample for the control of the disease during the next two months.

War Helps Medical Women.—A statement signed by the premier, Lord Curzon, and Hon. Arthur J. Balfour calls the attention of the public to the work in London of the School of Medicine for Women, which has now doubled its plant in an endeavor to cope with the war-time increase of opportunities for women physicians. The statement begins as follows: "The war constitutes the turning point in the position of medical women, for whom there are new openings and new opportunities in many directions."

Digitized by Google

NOTES & ABSTRACTS

The Treatment of Urethral Stricture by Excision.—R. Hamilton Russell, Melbourne (Brit. Jour. of Surg), describes a method of excision of urethral stricture with a plastic reconstruction of the urethral tube. This operation was developed by the author to obviate the fact that in the old operation of posterior urethrotomy there is usually a greater production of scar tissue after the operation than one had to deal with in the original stricture. Technic: A V-shaped incision with the apex forward is made in the perineum and the membranous urethra exposed after the same technic as used by Young in his perineal prostatectomy. The membranous urethra is well exposed behind the stricture and this dilated urethra is incised from the apex of the prostate anteriorly to the face of the stricture; guide sutures are placed at the edges of the urethra. A new incision extending forward from the apex of the original V incision is made to expose the bulb of the urethra in front of the stricture. The bulbous urethra is then opened over a guide for about an inch to the anterior face of the stricture; guide sutures are placed at each cut edge of this incision. The stricture is now well exposed, the periurethral fibrous tissue is dissected out, the actual strictured portion of the urethra is removed, the two free ends of the urethra which have now been slit up so as to form a ribbon are sutured with interrupted catgut end to end. The longitudinal incision in the urethra is not closed. A catheter is now inserted in the bladder, the lateral portions of the perineal wound are brought together with deep sutures, the perineal drain is left in the bladder for about a week when it is removed and the urethra allowed to heal up by itself. The author does not hesitate to split the urethra from the apex of the prostate to within an inch of the meatus if he has good perineal drainage. It is the invariable tendency for the urethra so converted into a flat band to convert itself back into a cylinder of the original caliber.

A Modified Grossich's Disinfection with Iodine for Operations.—On Tavel's instigation Reich-Brutzkus undertook the same histological studies of some modifications of Grossich's method as Walther and Tourraine performed with the unmodified method. The modifications are as follows. 1. Grossich, Walther, and others used 10 or 12 per cent official tincture of iodine. In Tavel's clinic a mixture of pure iodine 3, absolute alcohol 10, and chloroform 90 was used. 2. The previously named authors allowed the tincture of iodine to act for 10 minutes; in Tavel's clinic the time varied: seldom 10 minutes, generally 5 minutes, sometimes 2 minutes, and urgent cases 1 minute. 3. The other authors gave two coats of iodine and a third after the closure of the wound; Tavel gives one coat shortly before the incision is made. 4. Grossich did not remove the iodine with 96 per cent alcohol as Tavel does to prevent eczema and on account of possible catarrh of the mucous membrane. The following facts were observed among others: The tincture of iodine must act for at least 5 minutes in order to inhibit movement and growth of the bacteria and to kill them. In the 100 cases observed by the author in Tavel's clinic it made no clinical difference in the wound healing when the iodine was washed off with 96 per cent alcohol before the lapse of five minutes. In Tavel's clinic eczema was seldom caused by the iodine, even when 12 per cent iodine was used. In operations on the intestines care was taken to wrap the eviscerated intestines in warm, damp compresses, and, so far as possible, to keep them from touching the skin; therefore they had none of the bad results from disinfection with tincture of iodine which some surgeons have observed. The iodine penetrates the stratum lucidum and it is to be assumed that it also penetrates the rete malpighi. The author thinks Grossich's disinfection with tincture of iodine is the simplest and surest method.—Surg., Gyn. and Obst., April, 1915.

Suprarenal Gland in Shock.—J. F. Corbett, Minneapolis (Jour. A.M.A., July 31, 1915), after noticing the various explanations of the mechanism of shock, finds them defective, though he recognizes oligemia and acidosis as important. He suggests primary suprarenal exhaustion as a shock factor. After reviewing the action of epinephrin, the product of the medullary suprarenal, he says the smallest amount that will have any effect on the blood pressure of a normal dog is 0.42 c.c. of a 1:-1,000,000 solution per kilogram. This amount produces a fall of blood pressure and the amount necessary to produce a rise is several times as much. This indicates that in the normal individual just enough epinephrin is in circulation to maintain the tone of the "myoneural" junction, and we have no right to say that the normal blood pressure is maintained by epinephrin in

Digitized by Google

the blood, but rather that epinephrin sensitizes unstriped muscles of the vasomotor system to the sympathetic. It has also other functions than that of blood pressure control. Emergencies may call large amounts to the circulation, raising the blood pressure, shifting the blood to where it is more needed. The intact splanchnic nerves are necessary to the function of the medulla according to Cannon, Dreyer and Elliott. The reflex center for the control of the epinephrin output is in the medulla, somewhere between the first thoracic nerve and corpora quadrigemina. Emotional fright (Cannon, Elliott), simple anesthesia, cerebral injury, excitation of nerves, and poisoning with toxins are effective in reducing the epinephrin content of the suprarenal medulla, and act reflexly through the splanchnic nerves and are called on in emotion almost as frequently as the blood vessels themselves. Other authors have found emotional causes producing appreciable increase of epinephrin in the blood, and Corbett's observations are the same. In traumatic shock the forced output of epinephrin seemed to Corbett so marked that he undertook to determine the condition of the suprarenal glands in such cases, and this led him to conclude them a shock factor. He does not say that epinephrin loss is shock, but that its presence is necessary to overcome shock, and anything that depletes epinephrin favors the development of shock. Very little is known of the secretion of epinephrin, but from the fact that it ordinarily carries enormous loads to tide the individual through emergencies, it would seem that the storage discharge factor was paramount over the secretory roles. He gives a table of the average epinephrin content in various conditions of poisoning, disease, anesthesia, trauma, etc., assuming a scale in which the normal content was taken as 100 per cent, and concludes that shock is a composite in which epinephrin exhaustion and oligemia are predominant factors. Anesthesia, pain, fright and trauma are immediate agents in producing epinephrin exhaustion as well as shock.

Palmar Eruptions.—R. L. Sutton, Kansas City, Mo. (Jour., A.M.A., July 31, 1915), says that the cutaneous disorders which commonly involve the palms and sole are relatively few in number, and aside from eczema, the dry syphiloderma, particularly the tubercular and papulosquamous varieties are probably the most frequent offenders. In both eczema and syphilis the palmar involvement may be dependent on the generalized distribution of the eruption but in the later stages of both diseases they are frequently confined to the palms. Of those directly due to bacteria, infectious eczematoid dermatitis is the commonest, though dermatitis repens, including the acrodermatitis perstans of Hallopeau, is not unusual, and in the last year Sutton has met with three cases of granuloma pyogenicum in the palms. Of the irritative forms of dermatitis, that due to liquor formaldehydi is, in his experience, the most frequent. It is especially common in laboratory workers and in embalmers. In chronic radiodermatitis the dorsal surface is most often affected, but occasionally also the palm. Sutton does not agree with the common belief that psoriasis often is confined to the palms, but claims that it rarely occurs on the flexor surfaces, and in cases in which there is no evidence of the malady elsewhere one may safely ignore psoriasis, in generalized cases of ichthyosis the palms and soles are seldom markedly affected. In symmetrical keratodermia of the extremities sometimes referred to as ichthyosis, the thickening is limited strictly to the flexor surfaces of the hands and feet, and is probably trophic in origin. Heredity is an important factor in many cases. Seborrheic dermatitis of the palms is usually secondary. Aside from its superficial character the manifestations often resemble those of lues, and laboratory tests may be required. In the Southern states pompholyx is a comparatively common disorder, as a rule involving the flexor surface of the hands and the sides of the fingers. Sutton gives examples with illustrations and case histories of the various types of palmar eruptions, including, among the rarer maladies, pityriasis rubra pilaris and keratosis follicularis for purposes of comparison. In active inflamed lesion soothing applications are advised, to be followed by local stimulants, particularly those containing tar; soap and water are to be avoided. In chronic eczema of the palm, recourse must often be had to the more powerful keratolytic and reducing agents. Radiotherapy is often valuable in this type. Infectious eczematoid dermatitis usually responds promptly to a 5 per cent ammoniated mercury ointment. Dermatitis repens is much more rebellious, owing to the deep seated character of the abscesses. The frayed and undermined corneous collar should be trimmed away, and Ruggles' mixture (salicylic acid, 2 parts, tannic acid, 10 parts, and alcohol 88 parts) applied freely several times daily. In many cases autogenous vaccines may be called for before the disease is checked. For granuloma pyogenicum Sutton recom-

Digitized by Google

mends Pusey's carbon dioxid snow clipping off the top of the lesion, and freezing the base for at least one minute. Syphilitic palmar lesions generally require very little local treatment, but the liberal use of a calomel (10 per cent) ointment or one of ammoniated mercury will hasten their disappearance.

Skeletal Cancer.—Risley (Boston Med. and Surg. Jour.) after a study of two cases of metastatic bone carcinoma and a review of the literature sums up his work as follows: 1. Metastasis takes place probably by centrifugal spread along the lymphatic plexus of the deep fascia in most cases. 2. Bone metastases occur almost entirely in the areas of the body subject also to skin nodule metastases, i.e., everywhere proximal to the elbow and knee joints. Bones distal to these joints are very rarely involved. 3. Metastases are more common after cancer of the breast than any other organ, the prostate and thyroid being the next most common. 4. The liability of a bone to cancerous invasion increases with its proximity to the site of the primary focus. Thus the sternum and ribs are affected about equally and more frequently than any other bones. The spine, femur, humerus, pelvic and cranial bones come next. 5. The character of the secondary lesion always corresponds to that of the primary growth. 6. The frequency after cancer of the prostate may be as high as 25 per cent. 7. The vertebrae are the favorite seat of attack in scirrhus of the breast. 8. The percentage of vertebral metastases is nearly 25 per cent. 9. Spontaneous fracture is present in about 25 per cent of the cases. 10. Pain is the only characteristic symptom. 11. Visible or palpable tumor is rare. 12. We may set down the following points as diagnostic aids: Any fracture of a long bone occurring as a result of trivial injury should immediately suggest the possibility of bone metastases and lead to careful search for the primary new growth. In all cases of painful paraplegia a neoplasm should be suspected. A diagnosis of primary bone tumor should never be made without very careful examination of the abdomen, mammary glands, prostate, and thyroid for malignancy. It is rare that careful search will fail to reveal the primary focus.

Beer-makers are beginning to realize that they must part company with whisky-makers in their fight against temperance. They think there is a chance for beer if it throws whisky overboard, like Jonah.

SOCIETY PROCEEDINGS

MEDICAL SOCIETY OF THE MISSOURI VALLEY.

The annual meeting of this society, to be held in Des Moines on Thursday and Friday, September 23 and 24, promises to be one of the events of the fall season, and the committees in charge have about completed their arrangements. The scientific program surely contains a feast if we are to judge by the preliminary program sent out by Secretary Fassett. A variety of papers, touching many of the interesting problems of the day, will fill the time to good advantage, while the social entertainment will be so arranged as not to interfere with the papers.

Drs. Jno. B. Murphy and Jno. A. Witherspoon will deliver the orations in Surgery and Medicine, and Dr. Geo. W. Crile will contribute an interesting paper on "Cancer of the Pylorus." Other prominent men on the program are Drs. Chas. Lyman Greene, Dr. Samuel Robinson of the Mayo Clinic, Dr. Frederick Gaertner, Dr. Robt. H. Babcock and others.

The entertainment will include a luncheon at the Commercial Club, dinner at Hotel Savery on first evening, a theatre party and tea for the ladies, and interesting clinics at the hospitals on Saturday. Hotel Savery will be headquarters.

Following is the

PRELIMINARY PROGRAM.

Cancer of the Pylorus, Geo. W. Crile, Cleveland.

Some New Facts in the Physiology of Asthmatic Dyspnea, Orville H. Brown, St. Louis.

Some Etiological Factors in Hemorrhagic Diathesis, William W. Duke, Kansas City.

Vascular Disease in Mental Disorders, Frank Parsons Norbury, Jacksonville, Ill.

A Symptom in Extrauterine Pregnancy, H. J. Lenhoff, Lincoln, Neb.

Roentgen Shadow Reading demonstrated by lantern slides, W. H. Mick, Omaha.

Toxic Palsies Complicating Pregnancy, S. Grover Burnett, Kansas City.

Methods which May be Employed to Avoid Open Operations for Fractures, J. P. Lord, Omaha.

A New and Simple Operation for Prolapse of the Uterus, C. H. Newell, Omaha.

Radioactivity as a Therapeutic Agency, F. H. Kuegle, Omaha.

The Non-irritation Treatment of Pyloric Ulcer, John W. Shuman, Sioux City, Ia.

Digitized by Google

Sinusitis as a Source of Systemic Infections, Thaddeus Menassian, Des Moines.

The Intra-Spinous Treatment of Cerebrospinal Syphilis, G. Wilse Robinson, Kansas City.

Transplantation of the Ileocecal Valve, Hugo W. Wightman, Omaha.

Remarks on Cancer of the Breast, Charles O'Neill Rich, Omaha.

The Advantages of Vaginal Section in Pelvic Surgery, A. I. McKinnon, Lincoln.

One of the Effects of Chewing Snuff, Gershom H. Hill, Des Moines.

The Interpretation, from a Practical Standpoint, of the Wassermann Reaction, Julius S. Weingart, Des Moines.

The Desirability of Acquiring Early Immunity from Contagious Diseases, especially from Measles, Mary Strong, Omaha.

Diagnosis of Syphilis, T. M. Paul, St. Joseph.

Nitrous Oxide Analgesia in Obstetrics, Palmer Findley, Omaha.

Diabetes Mellitus, S. K. Davis, Libertyville, Ia.

A Modification in the Technique of Cesarean Section, Chas. Ryan, Des Moines.

Pellagra; A Case in Iowa, M. W. Flothow, Woodbine, Ia.

If you desire a complete program address Dr. Chas. Wood Fassett, secretary, 613 Lathrop Building, Kansas City, Mo.

List of Events of St. Louis Fall Festivities, October 4 to 10, 1915.—Veiled Prophet Pageant, Tuesday, October 5.—Street parade of 22 electric floats, costing, with the ball immediately following it, between $50,000 and $60,000. The prophet's thirty-eighth annual appearance in St. Louis. Theme: "Legends and Myths of All Nations."

Floats.—1, The Veiled Prophet; 2, Title Float, Myths and Legends; 3, The Second Labor of Hercules; 4, The Golden Fleece and the Argonauts; 5, Second Voyage of Sindbad; 6, Cyclops; 7, The Three Golden Apples; 8, Cerebrus; 9, The Wooing of the Maid of Beauty; 10, Kambalu; 11, Pandora; 12, Cinderella; 13, Beauty and the Beast; 14, Bluebeard; 15, Good King Arthur; 16, The Star and the Lily; 17, Puss in Boots; 18, The Fair One with the Golden Locks; 19, Evangeline; 20, Hiawatha; 21, Rip Van Winkle; 22, Hansel and Grethel.

Route.—East on Walnut at 6:45 p.m. from Den to Twenty-first, north on Twenty-first to Market, west on Market to Jefferson, west on Laclede to Grand, north on Grand to Lucas, east on Lucas to Compton, south on Compton to Washington, east on Washington to Fourth, south on Fourth to Market, west on Market to Broadway, north on Broadway to Olive, west on Olive to Jefferson and north on Jefferson to the Locust street entrance to the Coliseum, which will be reached at 10:10 p.m.

Medical and Surgical.—Those in charge of the various clinics and hospitals are arranging their work with the purpose of making the week full of opportunity for physicians who avail themselves of this occasion for a visit to the city. While the family is doing some of the many other things offered, its head may be profitably and entertainingly occupied.

River Parade and Races, Sunday, October 10.—Parade on the Mississippi River of more than 200 decorated motor boats, followed by speed-boat races and rowing races.

St. Louis Agricultural Fair, October 4 to 9.—Exhibits.—Horse Show, Dairy Cattle Show, Swine and Sheep Exhibits, Agricultural Exhibits, Poultry Show, Tractor Show, Farm Machinery Exhibits, Mule Show, etc. Amusements.—Harness races, running races, mule races, automobile races, etc. The world's largest saddle horse stake—$3,000. Band concerts daily.

St. Louis Automobile Show October 4 to 9.—America's first display of 1916 models.

Buy-in-St. Louis Week Displays, October 4 to 9.—Manifesting the importance of the St. Louis market.

Boston Symphony Orchestra, Saturday, October 6.—Complement of 101 men. Dr. Karl Muck, conductor. At the Odeon under the auspices of the St. Louis Symphony Society.

Farm Mortgage Bankers' Meeting, October 7 and 8.—National convention of the Farm Mortgage Bankers' Association of America.

America Meat Packers' Meeting.—National convention of the American Meat Packers' Association, opened Monday, October 11. Delegates are urged to arrive sufficiently early to enjoy all or part of the Fall Festivities.

History, Art and Botany.—Special Exhibits throughout the week at the Jefferson Memorial (home of the Missouri Historical Society), Shaw's Garden (America's foremost botanical park) and the City Art Museum, admission to all of which institutions is free.

Sixth Season of Grand Opera.—Music lovers should remain in St. Louis for the grand opera at the Odeon, October 11, 12 and 13, by the Boston Grand Opera Company, in conjunction with the Pavlowa Ballet Russe, under the auspices of the St. Louis Grand Opera Committee.

Digitized by Google

IN LIGHTER VEIN

Betty was told privately that she and mother would have to have oyster soup without the oysters. The young lady was much flattered at her share in this sacrifice to hospitality, and apparently disappointed when she found one small oyster in her plate. Holding it up on the spoon, she inquired in a stage whisper:

"Mother, shouldn't Mrs. Smith have this oyster, too?"—N. Y. Evening Post.

The Query Department.—Two correspondents wrote to a country editor to know, respectively, "The best way of assisting twins through the teething period," and "How to rid an orchard of grasshoppers." The editor answered both questions faithfully, but unfortunately got the names mixed, so that the fond father was thunderstruck by the following advice:

"If you are unfortunate enough to be plagued by these little pests the quickest means of settling them is to cover them with straw and set the straw on fire."

The man bothered with grasshoppers was equally amazed to read:

"The best method of treatment is to give them each a warm bath twice a day and rub their gums with boneset."—Practical Druggist.

"Grave" Jokes.—There is a whole quart of truth in that old jingle about "A little nonsense now and then," etc. If it were not for this occasional nonsense the vital statistics recorder would have a dry time indeed. Here are samples of some of the things he finds on death certificates under the heading Cause of Death:

"Went to bed feeling well, but woke up dead."

"Died suddenly at the age of 103. To this time he bid fair to reach a ripe old age."

"Do not know cause of death, but patient fully recovered from last illness."

"A mother, died in infancy."

"Died suddenly, nothing serious."

"Pulmonary hemorrhage—sudden death. (Duration four years.)"

"Kick by horse shod on left kidney."

"Don't know. Died without the aid of a physician."

"Deceased died from blood poison, caused by a broken ankle, which is remarkable, as his automobile struck him between the lamp and the radiator."

"Blow on head with ax. Contributory Cause—Another man's wife."—Michigan Monthly Bulletin of Vital Statistics.

Officer: "I ketched this here mutt pinchin bananas off a fruitstand."

Magistrate: "Aha! 'personating an officer! Two years."—Life.

Hoax: I thought you said that Jones was a musician?

Joax: Nonsense!

Hoax: You certainly told me he wrote melodies.

Joax: I told you he was a composer of heirs. He sells soothing syrup.—Practical Druggist.

The Remains.—A colored man died without medical attendance, and the coroner went to investigate.

"Did Samuel Williams live here?" he asked the weeping woman who opened the door.

"Yassuh," she replied between sobs.

"I want to see the remains."

"I is de remains," she answered proudly.

Vagaries of a Medical Cynic.—The tailor's bill is the last one paid—then comes the doctor's.

Reckoning without his host—the tapeworm at meal time.

Recipe to make a specialist: One year and a half general practice, two medical publications, one paper before a medical society, discussion of every paper remotely associated with subject (always interpolating "we rhinologists," for example), a trip abroad for at least two months, an office nurse and a raise of fee.

The difference between a doctor and a professor is twenty-three dollars.

The Medical Pickwick will confer the "Iron Cross" as follows:

Rhinologist: who doesn't consider tonsillotomy a dangerous operation—for the general practitioner to do.

Dermatologist: who can't cure eczema.

Surgeon: who hasn't published his first hundred cases of appendectomy.

Gynecologist: who hasn't a "special trick" in doing a perineorrhaphy.

Pediatrist: who admits he sometimes uses prepared infants' foods.

Orthopedist: who hasn't invented a brace for something.

Gastro-enterologist: who doesn't differ with every other gastro-enterologist on every question.

Proctologist: whoever admits he is one.

Internist: who doesn't refer to the surgeons as though they were another breed.

And general open-to-all "Iron Cross:" to the man who reports a mistake that didn't happen long ago and has served as a lesson since.—The Medical Pickwick, Saranac Lake, N.Y.

Digitized by Google

The Laboratory News

(Consolidated with The Medical Fortnightly October, 1914.)

A Journal of Laboratory Facts for the General Practitioner.

Edited by R. B. H. GRADWOHL, M. D., St. Louis.

ORIGINAL

THE PELLAGRALOGICAL CAMPAIGN IN 1914, WITH REMARKS UPON PELLAGRA AT BESSARABIA, ITALY.

PROF. G. TIZZONI

BOLOGNA, ITALY.

The writer publishes a memoire of many experiences illustrated with four plates. The conclusion are as follows: In the seventeen cases which he has studied, there has been shown the presence of the micro-organism already described by Tizzoni in the blood, in the spinal fluid and in pellagrous organs. These researches augment the value of the bacteriologial work already published and clears up the specific value of the prior investigations.

With more complete lavage of the coagulum it is possible to secure a positive result in every case of actual pellagra and the development of the blood culture is more rapid. The presence of the residual serum exercises an inhibitory influence upon the development of the cultures. The inhibitory action of the serum upon the development of the cultures is in relationship with the course of the disease and with the reaction of the organism. This inhibitory action is lacking in normal serum (human); it is very feeble in the rapidly fatal forms of the disease and it disappears completely from the blood and organs after death.

The results of bacteriologic research in Bessarabia are identical with those obtained the same year and the preceding year in Italy, that is to say, one is enabled to isolate from the blood, the spinal fluid and the organs of the pellagrous Russians the same bacteria, with the same biological characteristics and morphologic behavior, with the same pathogenicity and pleomorphism that we have seen in the Italian campaign.

There exist clinical forms of pellagra which seem to have no kinship with "maidism," either on account of the fact that very little maize has been ingested or because sufficient time has not elapsed to produce intoxication.

In smears from various organs particularly the spleen in cases of typhoid pellagra and ordinary pellagra with severe "re-acutization," we can find the organisms identical in form, dimensions, disposition and polymorphism with the organisms found in the blood of the patient. These bacteria in the blood are found either free or in the white corpuscles (mononucleated cells of the blood).

The mutability of the bacterium of pellagra shows itself not only in morphology but in the color and other characteristics of the culture, liquefaction of gelatine, reaction of the media, coagulation of blood, hemolysis, fermentation of sugar.

These variations are in relationship with the stages of increase or decrease in the infection, with the action of the residual serum and the composition of the nutrient medium upon the micro-organism, or dependent upon other unknown conditions. In very grave forms of pellagra which are frequently observed in Russia, one observes pleomorphism in the original culture. In the course of adaptation of the microbe to a saprophytic life we can observe a series of morphologic variations which correspond to various cases of pellagra. In certain cultures it is possible to follow every phase of transition from one form to the other, of a kind to make us affirm the undoubted unity of the microbic species. This is also confirmed by the diversity of cultures obtained at different blood-takings or at different washings of the same sample of blood.

Certain cultures suddenly change their form and pass from the form we call Type A to Type B. In the original cultures from the severe cases, such as are seen in Russia, and particularly in the broth cultures which are aged there develops the pseudo-mycelial forms. These forms belong to the ancetraux phytogenetique such as are found on special nutrient media containing hydrate and carbon compounds. These phenomena are seen not only in the streptococcic forms, but also in the staphylococcic types (Ursu). The spontaneous return to the ancestral

Digitized by Google

form, the preponderance of the type A over the type B, and in particular the frequency of occurrence of the bacillary type A, are observed in the cultures isolated from the Russian cases. They show that in this region the microbe of pellagra is more liable to exist in its original unchanged form than in cases from other countries. It also shows that the disease is of more recent origin in Bessarabia than in Italy.

The plurality of microbic formations indicate that these bacteria are hardy and not easily lost in culture.

EDITORIAL

Death of Dr. Klokke.

Dr. W. E. Klokke of this city, died after a very brief illness in Tampa, Florida, August 8, 1915. His sudden and unexpected death came as a great shock to his many lay and professional friends in this city and in Chicago, where he studied medicine. Dr. Klokke was born in 1877. He studied medicine at the College of Physicians and Surgeons of Illinois. He came to St. Louis in 1898 and did general practice for ten years. He went abroad in 1908 and took up the specialty of diseases of the eye, ear, nose and throat. He worked with Professors Bruehl and Ritter in Berlin and did considerable work with Prof. Fuchs, of Vienna, in ophthalmology. He also took special courses with Prof. Neumann of Vienna.

The doctor had acquired a very large practice in his chosen field, and his untimely death cut short what could assuredly be termed a successful career in medical practice. Dr. Klokke was a genial man and was well beloved by his many professional confreres. On behalf of these men, his comrades in arms, we extend to his bereaved wife and family our sincerest words of sympathy and condolence.

Helen Rowland says: A married man is merely a bachelor who has proposed once too often.

Turpentine and sugar, three-drop doses taken every half hour, and topical applications made to the throat and chest by flannel cloths wrung out of hot water and saturated with the turpentine (the applied cloths covered with dry compresses) is considered a sovereign remedy in croup.

LABORATORY AIDS

Iodides and ergot, persistently pushed clear up many obscure central-lesion symptoms. Exudates short of apoplexy are comcom.

Brief Note on the Treatment of a Case of Kala-Azar.—Castellani (Jour. Trop. Med., 1915, XVII, 112) cites an example of an Indian coolie suffering from kala-azar who was treated at intervals with his so-called "yaws mixture," which contains tartar emetic, sodium salicylate, potassium iodid, and sodium bicarbonate. The patient also had intravenous injections of tartar emetic, and tartar emetic and Fowler's solution. The improvement was remarkable. Castellani is inclined to believe that tartar emetic had the greatest part in causing the rather striking improvement.

The War and Cholera.—Prof. W. J. Simpson, (Transactions of the Society of Tropical Medicine and Hygiene, March, 1915, Vol. VIII, No. 5.)—Cholera as a devastating epidemic has almost invariably been concomitant with the march of troops or wandering of masses of people on pilgrimages, or has followed closely in the wake of both. Fourteen different epidemics have scourged the populations of European and Asiatic countries and have spread beyond the confines of the old world to the Western Hemisphere on more than one occasion. During the prevailing great conflict, the attention of the army and navy sanitarians has been keenly directed toward the prophylaxis and the eradication of the disease. More than ever are the preventive measures to be closely considered and consistently applied. Experience has taught that the dissemination of the malady is virtually dependent on sanitary conditions which are to a large degree preventable. These are crowding, feeding, bodily resistance the carriers, and transmission by food contamination. The carriers, which are of greatest importance next to contamination from cholera cases are hardest to deal with. They may harbor the bacilli in the gall bladder for some weeks to a year. These cases represent the source from which the epidemic arises, and doubtless determines the virulence to some extent. The dejecta of patients, the flies, the infection of water, milk, vegetables and foodstuffs by unclean fingers, are the means by which the comma bacillus re-enters the digestive tract of the perspective victim. Poor clothing in bad weather reduces vitality and lets down the

Digitized by Google

bars to infection. Bad and insufficient food act in conjunction with poor clothing to lower vitality. Prophylaxis consists in proper food, rest, sufficient clothing, internment of carriers, sterilization of dejecta and the inoculation with protective vaccines. With regard to the latter, and especially Haffkine's vaccin, so many hundreds of thousands of soldiers and civilians have received preventive treatment that scarcely any shadow of a doubt can remain as to the efficacy. It is pointed out that Greece saved itself from an epidemic during the last campaign, when over 104,000 soldiers were inoculated. Of these, 91,224 received two inoculations, resulting in only seven cases per thousand; 14,613 received only one inoculation with morbidity of 42 per thousand. Besides the above, the success of Simpson, Haffkine, Greig and others among the Indians more than supply evidence of the value of wholesale vaccination as a most reliable preventive measure.

The Cerebrospinal Fluid in Pellagra.—(U. S. Public Health Reports, 1914, September 11. Vol. 29, No. 37, p. 2360.)—W. F. Lorenz, in the Georgia State Sanitarium, examined 106 cases of pellagra, making 153 lumbar punctures. The cases were mostly acute, showing several mental and physical manifestations, although there were included cases which showed very little or no mental disturbance. A second puncture was made in some cases after the acute symptoms had subsided. A routine cell count, estimation of globulin, Wassermann and Lange tests were made in each incidence. In only eight cases was there a lymphocytosis ranging from 20-60 cells per cmm., which also gave positive Wassermann tests with both fluid and serum. Two other moribund cases were positive to Wassermann. The former eight were considered as having syphilis as a complication. The author has concluded from his evidence that the spinal fluid findings are inconsistent with the possibility of pellagra being an infectious disease of the central nervous system.

Destruction of Body Lice by Oil of Eucalyptus.—(Bull. de la Soc. de Path. Exotique, June T, 1915.)—Drs. Edmond Sergent and H. Foley contribute a valuable article on the destruction of body lice. They say that they showed, at the Pasteur Institute in Algiers, in 1908-1909, that the agent of transmission of relapsing fever is the body louse. At the Pasteur Institute in Tunis, C. Nicolle, C. Comte and E. Conseil proved that the carrier of the infection of exanthematic typhus is likewise the body louse. Thus, French discoveries established the mode of propagation of two diseases that have for centuries enjoyed an unenviable fame for destructiveness they caused in armies and which are now very much in evidence in the European conflict. The campaign against vermin thus is the basis of prophylaxis against typhus fever and relapsing fever. The best means of destroying the fleas is by changing the clothing and disinfecting them in a sterilizer, while the man himself takes a bath. Unfortunately, these simple measures are not feasible during a military campaign, particularly at the front. We may resort to destroying the vermin in loco, on the clothing and the body while still clothed. Several agents have been recommended, among them being tobacco smoke and camphorated oil. The labors of the authors have shown that the essential oils are the most efficient disinfestation agents. They used chiefly the essence of eucalyptus, on account of its low price and its abundance in Algeria. The fight against the body louse is guided by the fact that it is a clothing louse, as is indicated by its name, Pediculus vestamenti Nitsch. It avoids the light and lives in the folds of the clothing, especially the upper part of the dorsal region. It goes to the skin only to bite and draw blood, which last about twenty-five minutes and is not reported every day. Thus, it is not the skin that needs disinfecting, but the clothing. The underclothing is chiefly infested, in places that are not in direct contact with the skin. The burrows are found in a kind of closed vessel, with warm air, and hidden, protected by the outer garments (the soldier's hood). In their experiments with eucalyptol, the authors worked in vitro and on the living subject. A piece of cloth was moistened with a few drops of eucalyptus essence and dried in the open air. Some lice, being placed upon the dried cloth, became greatly agitated; they had convulsive movements of the abdomen, legs and antennae, and were dead in a few seconds. Two little cloth caps were placed in a glass vase, one untreated and the other moistened with essence of eucalyptus but afterward dried. Twenty fleas were placed in the space midway between the two caps. Of these, seventeen took refuge in the untreated cap in less than three hours and were still alive at the end of three days; the other three wandered off to the eucalyptized cap and were killed almost instantly. In the open air the action of the eucalyptus is nil at a distance of two or three centimeters. In a tube plugged with caoutchouc, the eucalyptol is fatal at a dis-

Digitized by Google

tance of ten centimeters in a few hours. It is to be observed that the conditions of a closed vessel are reproduced in the underclothing. The odor of the eucalyptus kills the lice through thick cloth. As compared with camphor, eucalyptol has shown itself to be much more energetic and reliable. In comparative tests, the eucalyptus killed all the fleas, whereas camphor killed only one-fifth or one-seventh of the whole number. In a dog (Irish setter) infested with Hoematopinus pilifer, a shoulder-cloth was rigged up and moistened, drop by drop, with essence of eucalyptus. In 48 hours the dog was examined and not a single live flea was found. Eight men, unequally infested with body lice, were treated. Their clothing was lightly sprinkled with essence of eucalyptus. These men continued to live in contact with other infested men, not treated. After 24 hours, there was not a louse on any of the men whose clothing had been sprinkled with the eucalyptus. This fact was strikingly illustrated in the case of a native who had so many lice that they were uncountable. In a few days not a single louse was found. In eight days, some young lice appeared, having hatched out, doubtless, after the others were killed.

Piroplasmosis Among European Cattle with Special Reference to the Etiology.—(Uber Piroplasmen bei europaischen Rindern mit besdonderer Beruckischtigung ihrer Atiologe. P. Knuth, Archiv fur Schiffs und Tropen-Hygiene, Bd. 19, No. 9, 1915.)—Ticks found to be the carriers of Piroplasma bigeminum and bovis seem to be the Ixodes ricinus, the Heamophysalis punctata or Cinnabarina, the latter in North Silesia, and according to Doritz also in England, Holland, France and all through South Europe. Macfadden and Stockman in England and Vrijburg in Holland, especially the former, have found that the Piroplasma divergens have been transmitted by H. cinnabarina, without lethal results. The cattle hemoglobinuria of Finland appears to be very similar if not identical with Texas fever. Cattle dying of rupture of the spleen with internal hemorrhage have frequently been noted in many parts of Europe. Some think this to be due to a special disease or apparently is in some cases due to piroplasmosis. Similarly the etiology of bovine hemoglobinuria seems not to be settled. Neither has it been possible to identify the symptoms entirely with those of any known form of piroplasmosis.

Landau's Reaction.—(Escuela de Medicina, Guatemala, Tomo XVIII, No. 7.) Dr. M. Santa Cruz gives a summary of his experience with Landau's reaction in eighty-one cases. Dr. Santa Cruz followed rigorously the technique laid down by Landau. This consists in mixing with 0.2 c.c. of serum to be examined, 2.5 c.c. of the reagent, which consists of 0.025 gram (one-half grain, about) dissolved in 25 c.c. of liquid vaselin. The mixture of serum and reagent is shaken well and then set aside in a dark place for a period varying from five to fifteen hours, at the end of which time a few drops of a solution of starch are added. Serum derived from syphilitic subjects become decolorized, and, on being mixed with the starch-water, do not produce a blue color (iodid of starch), which is invariably produced when the serum is obtained from a healthy person or from one who has already been subjected to prolonged and energetic treatment. Dr. Santa Cruz obtained the blood from a vein at the bend of the elbow under strict asepsis. The serum was obtained either by spontaneous coagulation or by centrifugation for a few minutes. The test should be made with blood freshly drawn, since positive results are changed into negative when several hours have elapsed after withdrawing blood. Furthermore, to obtain a perfect result, the serum should not contain any corpuscles. The above-described iodin reagent should always be used a short time after being made. The starch solution should be well boiled and then set aside to cool off, since a high temperature would decolorized the iodid of starch in case the reaction were negative and would also cause coagulation of the serum-albumen. The solution should always be fluid enough to facilitate manipulation. The serum is measured with a Levaditi graduated pipette; the reagent with a Mohr's burette; the mixing is done in tubes such as are used in the Wassermann reaction. Since Dr. Santa Cruz was not able to procure tetrachlorite of methane (tetrachloride of carbon), he could not carry out the other procedure described by Landau. This latter is simpler than the other and the result is ascertained in a shorter time, about four hours. The results of the observations are given below. Among the serums of syphilitics whose infection is latent and which give a negative result are included ten cases from private practice which had taken intensive treatment with salvarsan and mercury, or neosalvarsan and mercury; the other cases were hospital patients that had been kept a long time under mercurial treatment. It may be interesting to cite two cases. In the serum of an old syphilitic, without manifestations and

Digitized by Google

without having followed any treatment for a long time, a test was made, with negative results. In order to solve the problems imposed by the patient, the doctor offered to make a "Milian test." Accordingly, six days after having made an intravenous injection of neosalvarsan after Dr. Paul Ravaut's method, the Landau test was repeated, and this time it was positive. This observation permits us to infer that Landau's reaction resembles Wassermann's, in that it is influenced in latent syphilis and in cases untreated for at least six months by intravenous injections of neosalvarsan. The other case was that of a young syphilophobe, who had had chancroids four years before, not followed by any manifestation on the skin or mucous membranes. In this case, the Landau reaction was negative. For the purpose of making the "Milian test," 40 cgm. of neosalvarsan was injected intravenously and five days afterwards the Landau test was again negative; and once more, fifteen days later, the test still gave a negative result.

TABLE SHOWING RESULTS OF LANDAU'S TEST.

	Negative	Positive.	Total.
Primary syphilis	...	4	4
Secondary syphilis (active)	...	14	14
Latent syphilis	12	7	19
Tertiary syphilis	...	5	5
Hereditary syphilis (active)	...	1	1
Hereditary syphilis (latent)	1	...	1
Acute abscess	1	...	1
Blenorrhagia	12	...	12
Soft chancre	12	...	12
Epithelioma of tongue	1	...	1
Cerebral hemorrhage	1	...	1
Contused wounds	1	...	1
Lipoma	1	...	1
Chronic myelitis	1	...	1
Psoriasis	2	...	2
Simple ulcer of leg	5	...	5

Tropical Febrile Splenomegaly and Its Surgical Treatment.—(James L. Maxwell, Ibid.)—The general clinical picture presents an individual much emaciated with sunken chest, enlarged abdomen, edematous legs, arthy complexion, wasted and flabby muscles, dry and inelastic skin, temperature above normal, with no bile or albumin in the urine and with an enormously enlarged spleen. The blood shows diminution of the red and a variable white cell count. The disease progresses to extreme muscular debility, great accumulation of ascites, anasarca which becomes constant. Acute types occur in children with high remittent fever, very large spleen and liver and great emaciation. Field workers are the ones usually attacked. In South Formosa the disease is extremely common. Kalaazar does not occur, and malarial spleens always respond to a certain extent to treatment. No absolute symptoms differentiate the disease, and the etiology is obscure. Splenectomy is to be considered where a leucopenia with enlargement of the liver is present, and where the ascites is small in quantity with a characteristic blood picture. Further, it is permissible with advanced ascites. The cases with small quantities or no ascites offer the best prognosis. The technique of the operation is given in detail, with special attention to removal of the organ, treatment of the pedicle, injury to the pancreas, anesthesia, etc.

Sand Flies (Phlebotomus) In China and Their Relation to Disease.—(Richard Arthur Bolt, Peking, China Medical Journal, Vol. XXIX, No. 2, March, 1915.)—Flies of this genus have been observed in large number around Peking and in other parts of China. The author of the article gives a description and microphotographs of the fly in question. He is in doubt, however, as to the species being P. papatassii. A table of the distribution so far as known, together with list of questions directed to medical residents in China concludes the article.

Anopheles as a Winter Carrier of Plasmodium: The Mosquito as a Prophylactic Indicator.—U. S. Public Health Reports, Vol. 30, No. 29, July 16, 1915.)—Mitzmain selected Scott, Mississippi, a locality having a malarial index of 40.9 per cent and investigated the presence of malarial infection in Anopheles mosquitoes by dissection of all which could be found. From February 9 to May 9, 1000 Anophelines were examined and found free from infection. As far as possible they were taken from the neighborhood of gamete-carriers. From May 9 on, about 50 were examined daily, taken from houses containing malaria-infected humans. Infected mosquitoes were first found May 15. From all tests which could be applied, it seemed that most of those examined previous to May 9 were hibernating mosquitoes. The writer concludes that the malarial parasite does not hibernate nor develop in the mosquito during the winter months, and that if all carriers be discovered and treated before the date at which Anophelines become infected, this date to be determined for each locality, malaria may be eliminated from that area.

The importance of this paper in relation to the proper time for beginning a campaign against malaria based upon attack from the human side, which is the only one practical in many areas, cannot be overestimated. It is unfortunate that the author

Digitized by Google

does not give the daily maximum and minimum temperature record. The factor of temperature is clearly the most important in determining the date at which the plasmodium can develop in the mosquito. If this be definitely ascertained by researches similar to that of this article, all that will be necessary to apply it to any locality is to have access to the weather reports. The date selected or beginning the campaign must be made more definite. It has been shown that the gametes of subtertain malaria do not appear until ten days after the vegetative forms of the same brood, and remain several days in the blood. As quinin does not always free the blood of vegetative forms for several days, and as variations of climate may be expected, it would seem better to begin the campaign at least six weeks before the earliest date at which it is expected to find the first infected Anopheline.

Two Cases of Cutaneous Leishmaniosis.—A Medicina Contemporanea; Jornal dos Medicos e Pharmaceuticos Portuguezes, Vol. XIX, No. 9.)—Dr. Alvaro Lapa describes two cases of cutaneous leishmaniosis in persons coming from Brazil. The disease attacked the face, the ears and the hands in one case, and was purely cutaneous in the other, showing only ulceration. In the first case, it was impossible to find typical Leishman-bodies because the lesions were old, but the parasites were easily found in the second case. Salvarsan made no impression on the disease, neither did radium nor any of the topical remedies employed. In the second case, Dr. Lapa finally used intravenous injections of tartar emetic according to the method devised by Brazilian authors. The success was complete; in three weeks the ulcerations had cicatrized.

Examination of Arriving Aliens for Uncinariasis at Honolulu.*—(By C. M. Fauntleroy, Passed Assistant Surgeon, United States Public Health Service.)—*The Laboratory Equipment, and Number and Duties of Assistants Required.*—The laboratory provided by the Immigration Service for use in the medical examination of aliens arriving at the port of Honolulu, T. H., consists of three compartments in the main building at the Immigration Station; these compartments being specially designed with a view to facilitating the work of handling large numbers of aliens in an orderly manner, and at a minimum loss of time. The three units of the laboratory are immediately adjoining and consist of (1) a specimen collecting room, (2) a specimen preparing room, and (3) an examining room. The specimen collecting room is divided into eight small closets, four in one row for males and four in another row for females. These are used for the collection of fecal specimens in a manner to be described presently. Each closet is 3 feet square by 6 feet high thus allowing sufficient space for one person. All the closets are open at the top to permit light and ventilation and a space of 4 inches is left unsealed between the walls and floor except the outside wall so as to allow the entire floor space of all eight closets to be flushed at one time with a garden hose attached to the water supply. The entire floor space is covered with a specially prepared cement paint. All the closets are provided with doors so as to give sufficient privacy when being used. The specimen preparing room measures 9 feet wide, 10 feet deep, and 10 feet high, and is immediately adjoining the compartment above described for the collection of specimens. This contains a specially selected slop sink for the final disposal of fecal material, etc. This sink is white enameled inside and out and supplied with a flushing rim encircling the top, and a water-closet cistern which provides an ample volume and force of water to ensure a thorough cleansing of all sides of the sink, and completely flushing the tap each time the apparatus is used. This fixture meets all the sanitary requirements of a combined slop sink and water-closet, viz: it does not allow the escape of sewer air from the soil pipe into the room; it is thoroughly and easily cleaned each time it is used; it has no hidden parts for the collection of filth; it is flushed out without the throwing of filth or spray into the air of the room; it has sufficient water supply to wash out the sink and trap each time and to refill the trap; and the trap itself is not siphoned or left empty by a discharge of water from this or another fixture. This room has a large rectangular window admitting plenty of light and ventilation. Fastened to the wall just in front of the window is a long hardwood work bench, upon which are placed the principal materials used in the preparation of the microscopic specimens, consisting of the following: an electric centrifuge tubes; two glass jars each containing 500 slides; two glass jars each containing 500 cover glasses (the slides and cover glasses are kept immersed in 95 per cent alcohol); a glass jar containing a few glass pipettes immersed in 2 per cent lysol solution; a small electric sterilizer; a thick

*American Journal of Tropical Diseases, May, 1915.

Digitized by Google

glass slab painted black on the under side; and a box containing platinum needles, glass rods and other small odds and ends. The side walls are provided with several shelves upon which are kept numerous articles including a quantity of 2 per cent lysol solution in large glass irrigating bottles; a copper-wire strainer, 40 strands to the inch, for straining fecal material; a large glass dish painted black upon the under side, for use in looking for worms discharged with the feces; an extra supply of microscopic slides and cover glasses, and centrifuge tubes; a number of bottles containing reagents for testing the urine, and several varieties of aniline stains; and a supply of agateware chambers, and ordinary shipping tags for use in identifying the fecal specimens; and a quantity of 20 per cent formalin solution for use in deodorizing the feces.

The examining room adjoins the specimen preparing room, with which it communicates by a door in the wall between the two, and is also of the same size. This room contains two large rectangular windows provided with large panes of glass; a microscope and accessories; a table and revolving chair.

The personnel of the laboratory consists of one medical examiner, one technical assistant, and one attendant.

The duties of the attendant are: to assemble the aliens to be examined outside the room where the specimens are to be collected, and maintain proper order and behavior among the aliens while the specimens are being obtained; to deliver to each alien a receptacle (agateware chamber) in which the feces are to be deposited, and an identification tag marked on one side with the name of the ship on which the alien arrived, the date of arrival, and the alien's manifest number; to conduct each alien to one of the small closets and there explain to him what he is required to do; to receive from each alien the receptacle containing the sample of his feces, with the identification tag attached, and deliver the same at once to the technical assistant.

The duties of the technical assistant are: to have charge of and assume responsibility for all materials used in the preparation of specimens, and conduct the work of preparing microscopic specimens under the direction of the medical examiner; to deliver to the medical examiner the specimens as they are prepared for microscopic examination; and to see that all parts of the laboratory are kept in a clean and orderly condition.

The duties of the medical examiner are: to have charge of and be responsible for the efficient conduct of all laboratory work, and supervise the duties of its personnel, under the direction of his commanding officer; to examine all microscopic specimens, and certify, for the information of the immigration officials, all aliens found to be afflicted with uncinariasis, or other diseased conditions requiring certification.

The Collection of Specimens for Examination.—The aliens to be examined for uncinariasis are assembled and arranged in order as they are listed upon the ship's manifest. Each alien is furnished with the receptacle, an ordinary agateware household chamber, and the identification tag previously mentioned. Having made the alien understand that he is required to furnish a sample of its feces to be deposited in the receptacle, he is admitted to one of the small closets. All eight closets are thus kept in constant use until the desired number of specimens have been obtained. Care is taken to prevent any conversation or communication between the aliens using adjoining closets. Each alien is required to deliver his receptacle containing his feces, not less than one-half ounce, to the attendant, with the identification tag attached to the chamber. Upon receipt of the specimens the attendant at once delivers the same to the technical assistant. As each closet is vacated, and the specimens delivered, another alien is admitted, and so on, until the required number of specimens have been obtained. It has been found that about 50 specimens can be obtained in 30 minutes. Upon completion of the collection of the specimens, the entire floor space and the inside walls of the closets are flushed out with a hose connected with the station water supply. No odor or filth remains about the closets, and the location of the closets close to the outer wall of the building, the upper half of which is left entirely open to the outside air and sunshine, being covered only by a wire screen, secures a free circulation of fresh air at all times, and effectually prevents the accumulation of any excremental odor while the closets are being used.

The Preparation of Specimens for Microscopic Examination.—Upon receipt of the receptacle containing the fecal specimen the laboratory assistant immediately sprays the feces with a 20 per cent formalin solution contained in a ordinary atomizer. This has been found to at once abolish the objectionable fecal odor. The assistant now takes the first four specimens that were received and with a glass rod removes about 2 grams of feces from each of the four specimens, and transfers this amount to four

Digitized by Google

clean centrifuge tubes. To each of the specimens removed to the centrifuge tubes there is added 5 cubic centimeters of a 2 per cent aqueous solution of lysol, this being thoroughly mixed with the feces with a glass rod. The tubes are next placed in the centifuge holders and the specimen contrifugalized at high speed for one minute. The tubes are now removed from the holders and all of the supernatant liquid in each of the tubes is carefully decanted so as not to disturb the sediment that has been thrown down during the foregoing process. Another 5 cubic centimeters of lysol solution is run into each tube and the sediment thoroughly mixed as before, after which the specimens are again centrifugalized for one minute at high speed. This process is carefully repeated three times, and upon the completion of the third centrifugalization, the supernatant liquid is decanted from all the tubes, and a small amount of the sediment is transferred to a clean glass slide. To this is added a small drop of aniline gentian-violet and the stained sediment covered with a cover-glass. The use of aniline gentian-violet has been found to add materially to the rapidity of making the microscopic examinations, owing to the fact that all the vegetable and other matter in the specimen is at once stained a dark blue or purple, leaving the hookworm eggs absolutely unstained, and thus enabling the examiner to proceed with greater rapidity in the examination than is advisable with the ordinary unstained specimen. The contrast in color between the hookworm eggs and all the other material in the specimen is very marked, so that the bringing of a hookworm egg anywhere in the microscopic field will at once attract the examiner's eye. The hookworm ova appear as the characteristic oval grayish segmented bodies in a field of dark blue and purple. It may also be mentioned that the ova of other intestinal animal parasites commonly found during the examination of feces for hookworm eggs, are likewise left unstained by the gentian-violet, for example, the ova of the Trichuris trichiura, as Ascaris lumbricoides retain their usual brown color. In very light, or suspected cases, of hookworm infection, the following technique of preparing microscopic specimens has given excellent results: About one ounce of feces is equally distributed in four centrifuge tubes, and to each of these is added about 10 cubic centimeters of 2 per cent solution of lysol and thoroughly mixed with the feces. The four tubes are next centrifugalized at high speed for one minute, the supernatant liquid decanted, more lysol solution added, and this process continued three times. Thus far the method is the same as described above, except for the increased amount of feces and lysol solution. Having poured off all the supernatant liquid after the completion of the third centrifugalization, all the sediment contained in the four tubes is now transferred to one of the tubes, and the centrifugalization repeated three times more as above described. An examination of this washed sediment will often show hookworm eggs, when none could be found by repeated examinations of specimens prepared by the usual methods.

The Written Instructions Posted in the Laboratory for the Guidance of the Assistants in the Method of Collection and Preparation of Specimens.—Collection and Identification of Specimens.—1. Each person to be furnished with receptacle, and identification card marked with the name of the ship, date of arrival, and the alien's manifest number.

2. The persons are to be admitted to the closets one at a time, and will deliver the specimen to the attendant with the identification tag attached to the receptacle.

3. Upon receipt of the specimens the attendant will immediately deliver the same to the assistant, who will spray the specimen with a deodorizing agent.

4. The specimen receptacles will be thoroughly cleaned by the attendant after they have been discarded by the assistant.

Preparation of Microscopic Specimens.—1. About 2 grams of the fecal material will be thoroughly mixed with 5 cubic centimeters of 2 per cent aqueous solution of lysol, in a centrifuge tube.

2. The specimens are to be prepared as above in series of four, each centrifuge tube being marked by the proper manifest number.

3. The specimens will be centrifugated at high speed for one minute, the supernatant liquid will then be decanted and fresh lysol solution added and mixed with the sediment in the tubes. This operation to be repeated three times.

4. Upon completion of the centrifugalization process, a small portion of the bottom sediment will be removed with a clean pipette and placed upon a clean slide, a small drop of aniline gentian-violet mixed with the sediment, and a clean cover glass placed upon it.

5. The receptacle containing the unprepared specimen, the centrifuge tubes, and the identification tags will be marked by the manifest number of the alien who furnished the specimen.

6. The slide preparations will be delivered at once to the medical examiner for

Digitized by Google

microscopic examination, together with the identification tag.

The Identification of Specimens.—When a large number of examinations must be made during the course of a day, as is necessary in examining immigrants, it is advisable to adopt some method by which the source of any and all fecal specimens can be quickly and accurately traced, and which will surely prevent the occurrence of trouble arising from the confusing of specimens. The following method of keeping track of all specimens of feces obtained from arriving aliens at Honolulu has proved eminently satisfactory, and is recommended for its simplicity and unfailing accuracy: Each alien submitted for examination is furnished with a small shipping tag, upon one side of which is stamped the name of the vessel on which the alien arrived, the date of arrival and the alien's manifest number. Every alien is required to attach his identification tag to the receptacle containing a specimen of his feces. No specimen of feces is accepted for examination unless this tag is attached to the receptacle when the specimen is delivered. This method makes it a simple matter to trace the specimens to their source, but it becomes necessary to carry the method of identification still further so as to avoid confusion when it comes to centrifugalizing four different specimens at the same time. This is accomplished in the following manner: When all the specimens have been properly tagged and delivered, the first four are placed together on the laboratory bench close to the centrifuge. The tags are now removed from the receptacles and as each tag is removed the receptacle to which it was attached is marked with a blue pencil with the manifest number marked upon the tag.

As each sample of a specimen of feces is removed to a centrifuge tube the tube is also marked by a grease pencil with the same manifest number previously marked upon the side of the receptacle from which the sample was taken. We now have the identification tag, the receptacle containing the unprepared feces, and the centrifuge tubes all marked with the manifest number of the aliens who furnished the specimens. This completes the method of identification for the first four specimens, and when the microscopic specimens are ready for examination they are delivered along with the proper identification tag to the examiner. It will thus be seen that the foregoing method can be applied in tracing any number of specimens without the slightest risk of causing confusion, and the examiner is enabled to refer back to any particular specimen if for any reason it is desired to re-examine it, as all unprepared specimens are retained until the examination of the entire batch is completed.

The Microscopic Examination of Slide Preparations.—A commissioned officer of the United States Public Health Service is detailed for this duty, and is held responsible for the efficient conduct of the work.

As the preparation of each series of four slide preparations is completed they are immediately delivered to the examiner a long with the proper identification tag. The examiner now proceeds with the microscopic examination, using Leitz low power objective 3, and Leitz eyepiece 3, to search for the hookworm eggs, they can readily be seen with the low power, and the fields are much larger than when using the high power objectives, so that the examination proceeds rapidly. In beginning the search for the ova it is advisable to have some regular method of procedure by which the entire specimen is thoroughly gone over once as rapidly as can be done efficiently, rather than to proceed by moving the slide here and there in a haphazard manner, resulting in the examination of the same microscopic fields several times, and the consequent loss of time; and also very probably overlooking several eggs that would be brought to view by the use of a more systematic search.

The writer invariably begins the examination of all slide preparations in the extreme lower right-hand corner of the specimen, and moves straight across to the opposite lower left-hand corner, when moving the slide down so as to bring the next field above into view, then straight back across the specimen to the same side at which the examination was commenced. This method of procedure is continued from one side to the other, renewing the field at each side until every part of the specimen has been searched, and no time has been lost in going over any part previously examined. Although the use of a mechanical stage in controlling the movement of the slide is of great assistance, it is not absolutely essential in making a systematic search of the specimen. Considerable skill is easily acquired in controlling the movement of the slide by the fingers. In the vast majority of cases the hookworm ova can readily be indentified by using only the lower power objective, but occasionally it is desirable to inspect a doubtful specimen more minutely, and for this purpose the Leitz 6, or 1-12" oil-immersion, num. ap. 1. 30, is employed. During the progress of

Digitized by Google

the examination it is customary to look also for the ova of other animal parasites, as a complete record is kept of the number of the different species found in the specimens, and their identification. The microscopic findings are briefly noted in pencil upon the front side of the identification tags, which serves as a preliminary record pending the completion of the entire number of examinations to be made, when the results are recorded in a book kept for this purpose.

The time required to collect, prepare, and examine the feces of arriving aliens is sometimes a matter of very great importance, as happens to be the case at Honolulu, owing to the limited facilities for housing and feeding any very large number of aliens at one time. This element in the examination of aliens has therefore received considerable attention with a view to reducing the time required for the medical inspection and at the same time maintaining a high degree of efficiency in the examinations. This has been accomplished by a close study of every step in the examinations, and the elimination of all unnecessary procedure. As stated elsewhere in this paper the time required to obtain about 50 specimens of feces from aliens will average about 30 minutes. This is believed to be the average minimum time required with the facilities available at the present time. The time consumed in the preparation and microscopic examination of slide specimens, including the entire operation from the time receptacles are taken to the laboratory bench, to the completion of the microscopic examination, has been found to average 16 specimens per hour. At this rate from 96 to 112 microscopic examinations can be completed in one day.

The Further Examination and Treatment of Aliens Certified for Uncinariasis.—The evidence upon which a medical certificate is issued showing that an alien is affected with uncinariasis, is based solely upon the finding of the hookworm ova, or the worms themselves, in the feces. Uncinariasis is classed as a "dangerous contagious disease" in the immigration laws, and all aliens so afflicted are not permitted to land and reside in the United States territory. The United States immigration authorities have authorized the treatment of certain aliens at the port of arrival, with a view to effecting a cure of the disease, and eventually permitting those cases to land in which a cure is effected, provided there are no other conditions so affecting the cases that would make their deportation mandatory. Upon receipt of a written request signed by the inspector in charge of the Immigration Service at Honolulu, the treatment of cases of uncinariasis in arriving aliens is conducted at the immigration station. Prior to beginning treatment of any case of uncinariasis it is customary for the medical examiner to make a thorough physical examination of the alien with a view to determining his general physical condition, and whether or not any vital organ is so diseased as to make it inadvisable to proceed with the treatment. This preliminary examination also includes a study of the alien's blood, and special attention is given to the determination of the percentage of hemoglobin, and red cells. The drug employed in the treatment of all cases is thymol, owing to its almost specific action in destroying the worms lodged in the intestines. The dose varies according to circumstances. In the treatment of adults in good physical condition, and without marked anemia, the full dose of 60 to 80 grains is given. In the treatment of children the dose is regulated according to the apparent age and physical condition. The full dose of thymol is divided into two or three parts, each part being given at an interval of one or two hours apart. The patients are first given a dose of magnesium sulphate the evening before, and the following morning the first portion of thymol is administered in capsules loosely filled with the drug, no breakfast being allowed, and at the proper interval another portion is given, and so on, until the entire dose has been taken. Two hours after the last portion of the thymol has been taken a dose of magnesium sulphate is give, and unless the bowels are freely moved within four hours the dose of salts is repeated. While undergoing this treatment the patients are required to remain quiet and lie upon the right side, so as to facilitate the passage of the drug into the small intestines. Under no circumstances is castor oil ever given during the treatment of these cases, owing to the solubility of the drug in the oil. The drinking of milk, or anything containing alcohol is also prohibited. After the bowels have been moved several times following the last dose of thymol, a cup of tea without milk, and a little soup or broth is given. The allowance of tea and soup at this time has never been followed by any untoward symptoms, and it seems to stimulate and strengthen the patient, who by this time is considerably weakened by the lack of nourishment, and the action of the purgative. The question as to whether a cure has been effected as the result of the foregoing treatment is determined by microscopic examinations of the patient's feces made at fre-

Digitized by Google

quent intervals for a number of days after the treatment. The finding of hookworm ova in the feces at one of the examinations is positive proof of living worms in the intestines, and is followed by a repetition of the treatment, until the feces are found to be free from hookworm ova after repeated examinations made at intervals after the last treatment.

Preliminary Report of Twenty Cases of Pellagra with Picric Acid.—(Medical Bulletin of the Harris County Medical Society, Vol. 7, No. 2, p. 24.)—W. T. Wilson calls attention to 35 cases of pellagra, mostly negresses, being treated externally with weak solutions and as a gargle. No toxic symptoms have been noticed when used intelligently. He reports improvement and loss of all symptoms in from 30 to 50 days. The author desires information of any pellagrins being bitten by spiders and possibly tracing their infections to that time.

Statistical Data About the Increase of Population of Europe.—The Budapest statistical bureau publishes interesting data on the decrease of the birth rate in the civilized world during the last eighty years. According to this report, the number of births decreases in Europe from east to west. In 1913 the rate per thousand population was as follows: Russia, 43.9; Bulgaria, 42.0; Roumania, 39.2; Serbia, 38.5; Austria, 32.6; Hungary, 35.7; Italy, 33.3; Spain, 33.1; Portugal, 32.3; Germany, 29.8; Holland, 28.6; Denmark, 27.5; Norway, 26.1; Sweden, 24.7; Great Britan, 25.0; Switzerland, 25.0; Belgium, 23.6; France, 19.6. Hand in hand with the decrease in birth rate, however, the death rate similarly decreased from east to west. The death rate per thousand population in 1913 was: Italy, 28.9 Roumania, 24.8; Bulgaria 23.5; Serbia, 22.1; Hungary, 23.1; Spain, 23.3; Austria. 23.0; Portugal, 19.8; France, 17.8; Germany, 16.2; Belgium, 15.2; Switzerland, 15.1; Great Britain, 14.0; Sweden, 14.0; Holland, 13.6; Denmark, 12.9. From the comparison of these two series of numbers, the following conclusion can be drawn. The increase of population in 1913 per thousand population has been: Bulgaria, 18.5; Serbia, 16.4; Holland, 15.0; Russia, 15.0; Denmark, 14.6; Roumania, 14.4; Germany, 15.6; Italy, 13.4; Portugal, 12.7; Norway, 12.6; Hungary, 12.1; Austria, 11.3; Great Britain, 11.0; Sweden, 10.7; Switzerland, 7.9; Spain, 9.8; Belgium, 8.6; France, 1.8.

THE MEDICAL FORTNIGHTLY
and LABORATORY NEWS

A Cosmopolitan Magazine for the General Practitioner Issued on the Fifteenth of Every Month.

Entered at the St. Joseph, Mo., postoffice as second-class mail matter.

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scientific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

Advertising forms close on the fifth of each month. Time should be allowed to submit proof for correction. Advertising rates on application.

Subscription, $1.00 a year, in advance, including postage to any part of the United States, Mexico and Canada. Postage to foreign countries in the Universal Postal Union, including Newfoundland, 50c a year additional.

Subscriptions may begin at any time; volume begins with January Number.

Contributors should understand that corrected typewritten copy is essential to clean proof and prompt publication, and is much more satisfactory than manuscript. Original articles should be as condensed as justice to the subject will allow.

Offices in St. Joseph, St. Louis, and Kansas City, where specimen copies may be obtained, and subscriptions will be received.

Remittances and business communications should be addressed to the Fortnightly Press Co.

Contributions and books for review should be addrssed to the Managing Editor, 714 and 717 Century Building, St. Louis, Mo.

Kansas City Office, 618 Lathrop Building.

MEDICAL MISCELLANY

Upon the admission of Dr. Frank E. Crozier, president of the Dr. J. L. Stephens Sanitarium Company, of Lebanon, Ohio, that he was a narcotic drug addict and had been since his service in the Spanish-American war, United States Collector of Internal Revenue A. C. Gilligan of the Cincinnati District, on July 21, took from the company its order blanks for the purchase of narcotic drugs, thus practically revoking its license under the Harrison Anti-Narcotic Law and putting the company out of business so far as treatment of drug addicts is concerned.—Lancet-Clinic.

Street Accidents in New York City.—Figures prepared by the Bureau of Records of the Department of Health show that during June, 1915, 34 persons were killed upon the streets of New York City by automobiles, an increase of 70 per cent over the number of similar accidents that occurred during June, 1914. This increase the report of the Health Commissioner, states, is not at all exceptional; it is, on the contrary, only a reflection of the steady increase in this class of accidents that has been going on for several years. During the first six months of 1915, 152 lives were

Digitized by Google

sacrificed. A conservative estimate is that one person in ten injured dies. Assuming this ratio to have held good in this city during the six months of 1915, there were 1,520 persons injured by automobiles. The remedy for this needless sacrifice of life, the department holds, is the adoption of a State law or a city ordinance which will comple those who desire to operate motor vehicles on the streets of the city to submit to an adequate test of fitness as a condition precedent to the obtainment of a license or permit. Under the present Highways law of the State of New York, any owner or any member of the family of any owner is permitted to drive a motorcar. The question of mental or physicial capacity does not enter.

A Tough Lot.—A man one day entered a London police court. The magistrate happened to recognize him as a fellow clubman, and genially invited him to take a seat on the bench. The visitor was delighted at the honor done him, and as he sat down beside the magistrate he looked wonderingly round the crowded court.

"I see you have a remarkably tough lot of customer to deal with this mornjng," he said in surprise to the magistrate.

"Hush," replied the magistrate, shaking his head to impose silence, "those are the lawyers!"—Exchange.

New York and New England Association Railway Surgeons.—The twenty-fifth annual session of the New York and New England Association Railway Surgeons, celebrating the quarter century anniversary of the organization of the association, will be held at Hotel Astor, New York City, October 21, 1915, under the presidency of Dr. W. H. Marcy, of Buffalo, N.Y. A very interesting and attractive program has been arranged. Railway surgeons, attorneys and officials, and all members of the medical profession are cordially invited to attend. Dr. George Chaffee, corresponding secretary, 338 47th street, Brooklyn, N.Y.

King Rubber.—Very early in the history of rubber, its possibilities were startling. As time passes and the ingenuity of man is exercised, we find that rubber continues to play a very important part in making possible practical inventions of great importance. We are reminded of this as we read of the development of the submarine. This craft is as a fully dependent on rubber as is the automobile. Those of our readers who have given some attention to the construction of submarines must realize that the prime essential in the construction of this vessel is a degree of tightness which is not ordinarily attained. A submarine must be tight in a new sense just as objects used in microscopical work must be clean in a microscopical sense. The submarine must not only be leak-proof against the inrush of water but must be equally tight against the escape of gases and the conduction of electrical power. The ability of the manufacturer to make a submarine which is leak-proof as far as water, gas and electricity are concerned is made possible through the proper use of rubber. Perhaps some other means will in time be discovered but it is only in prospect, the same as may be said of the substitute for rubber in automobile tires. Fortunately, the quantity of rubber required in the manufacture of submarines is not sufficiently great to make serious inroads on the rubber supply. What rubber is used, however, is absolutely necessary, and we find that rubber is king of the submarine as well as of the automobile.—Meyer Bros.' Druggist.

In 1862 an intimate friend of President Lincoln visited him in Washington, finding him rather depressed in spirits as the result of the reverses then repeatedly suffered by the federal troops.

"This being president isn't all it is supposed to be, is it, Mr. Lincoln?" said his visitor. "No," Lincoln replied, his eye twinkling for a moment. "I feel sometimes like the Irishman who, after being ridden on a rail, said: 'If it wasn't for the honor of th' thing, I'd rather walk.'"

The treatment of tuberculosis had for some years settled into a triad that appeared unbreakable—rest, hyperalimentation, and continual aeration. The third still stands secure; the second has been much modified; the first has received a notable blow from Pescher. That rural patients do better than mural he attributes to pulmonary ventilation, from the work they cannot forego. Still, rest in bed during fever hours is indispensable.

Chlorinated Lime in Gangrene.—Vincent (Press Medicale) reports treating gangrenous wounds with a mixture of fresh chlorinated lime with ten parts of powdered boric acid. He first cleanses the wound and then dusts the above powder over it and the surrounding skin, using a generous quantity. In from two to three days the wound is changed to a healthy condition. New dressings are employed in twenty-four hours, providing there is much secretion; otherwise the dressing is not removed for forty-eight hours.

Digitized by Google

DR. SEJOURNET'S SANTONIN COMP. PILLS

Anti-diabetic and Reconstructive. Regulates Activity of Hepatic Cells. Rapidly Diminishes the Glycosuria. No Special Diet Needed. Prevents the Complications of Diabetes.

Dose: 1 pill twice daily for 20 days.

INTERESTED PHYSICIANS WRITE

GEO. J. WALLAU, Inc. 6 Cliff St., NEW YORK

PAUTAUBERGE'S SOLUTION

RESPIRATORY DISEASES

rapidly respond to the almost specific action of this ideal combination of the chloro-phosphate of lime and creosote. IT SOLVES THE PROBLEM OF SUCCESSFUL CREOSOTE THERAPY. No nausea, no gastric irritation, no unpleasant effect—simply gratifying control of respiratory symptoms and notable improvement in general bodily nutrition.

Full and complete literature on request.

GEO. J. WALLAU, Inc.
2-6 CLIFF STREET, NEW YORK, N. Y.

CARABAÑA

An Ideal Laxative Water

with a larger amount of sodium sulphate in natural solution than any other known water. Invaluable in all conditions where prompt laxative or cathartic action is desired, without disagreeable after effect. Most effective in small doses.

GEO. J. WALLAU, Inc., 6 Cliff Street, N.Y.

Summer Skin Afflictions

—sunburn, chafing, prickly heat and the like—are often more satisfactorily relieved by

K-Y (REG. U. S. PAT. OFF.) *Lubricating Jelly*

than by any other local remedy.

Colorless, non-greasy, water-soluble, absolutely non-staining to skin or clothing, and by all means the most cleanly and agreeable of all local applications, "K-Y" is unequalled as a means of controlling itching, allaying irritation and relieving capillary congestion.

As its soothing properties become known, "K-Y" promptly supersedes all other applications.

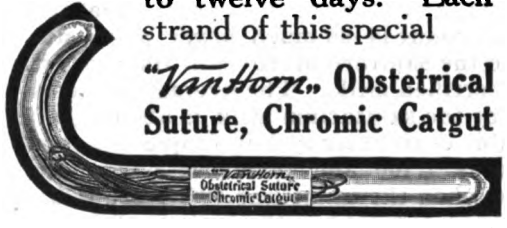
VAN HORN & SAWTELL

15-17 East 40th St. New York, U. S. A. AND *31-33 High Holborn London, England*

IN THAT CONFINEMENT TEAR

If you favor immediate repair, use our especially chromicized catgut prepared to hold seven to twelve days. Each strand of this special

"VanHorn" Obstetrical Suture, Chromic Catgut



is threaded on a suitable needle, ready for instant use. Indispensable for your surgical bag. One tube in each box. Price, 25 cents each; $3.00 per dozen tubes. No samples.

For Sale by Your Dealer,
or Sent Upon Receipt of Price

VAN HORN and SAWTELL

New York, U. S. A. 15-17 E. 40th Street AND London, England 31-33 High Holborn

Digitized by Google

Helen Rowland says: The time for repentance is between the temptation and the kiss—no man will believe you, afterward.

The only kind of honesty that is of any value is the kind that corrects mistakes that are in your favor as well as those the other way.

The world's longest jump on skies was made near Christiania, Norway, by Amble Omundsen, who cleared 177 feet. This is eleven feet more than the former record, which was made by a Chicago professional.

Smuggling rubber out of the United States is something that requires skill on account of the rigid inspection made by the government officials. Not long ago, rubber was found hidden in barrels of rosin and more recently a smuggler attempted to hide rubber in bales of cotton. Five men have been convicted in connection with these attempts.

In line with its general insistence upon pure foods, the Battle Creek Sanitarium has elaborate arrangements for safeguarding its milk supply. The milk is produced at a special dairy under very modern, sanitary conditions. It is subjected to rigid microscopic tests daily and not only the price, but the acceptance of the product depends upon a very high standard of purity. Certified milk demands a bacteria count not exceeding 10,000 per cubic centimeter—about twenty drops of milk—and the milk supply for the sanitarium tables is not allowed to exceed the standard set for certified milk, and as a very general rule the bacteria count is so much lower as to authorize the sanitarium to call its product super-certified milk. The average bacteria count of the sanitarium milk is about 2,500 per cubic centimeter and it frequently runs as low as 1,200 and instances have been known when the count was 400, a count almost unprecedented in the history of dairying. The value of such a high standard of milk can be very well appreciated by the physicians who have to combat the maladies produced by unclean milk supplies.

The Natural History of Cancer.—Asserting that cancer is neither hereditary, contagious nor infectious, and that it cannot possibly come into existence if the blood is kept in a healthy condition and diet and other hygienic factors are properly regulated, Dr. Robert Bell, of London, in Medical Record, June 5, 1915, goes on to say: Cancer is a disease consequent upon a long-continued toxic condition of the blood, wherein cell metabolism has been supplanted by cell metamorphosis and resulting in a malignant neoplasm completely dissociated from physiological control and growing as does a fungus. Metastasis, so Dr. Bell asserts, is due, not to carriage by the lymphatic, but to a sort of spore-formation of the fungus (cancerous) growth, which he has demonstrated under magnification of 1,000 diameters. It is a well-known fact that a fungus is able to take root and develop only on decaying, dead, or devitalized material. This is the history of cancer as well. The cure of cancer is dependent upon revitalizing the tissues by dietetic, hygienic and therapeutic measures. An incidental proof of this spore theory is that cancer cells, like fungus cells, are very rich in lecithin. An excess of lecithin in the system is dependent upon excessive nitrogenous ingestion and food being deprived of its vital principles by cooking, less meat should be used and more raw fruits and vegetables. Stress is laid upon constipation as incident to the defective diet, so provocative of precancerous conditions.

Corpora Lutea.—That corpora lutea is a therapeutic agent of great value in the treatment of certain diseases and conditions peculiar to women is now an established fact. It is known that functionally the corpus luteum sustains a more or less important relation to ovulation, menstruation, nutrition of the genitalia, lactation, etc. Perversions of these functions, as seen clinically, are often susceptible of correction by the administration of corpora lutea from animals in properly prepared form. For this vicarious therapy the ovaries from cattle and swine are procured and the corpora lutea removed, dried and powdered. This material is supplied by Parke, Davis & Co. in capsules of five grains each, equivalent to about thirty grains of fresh corpus luteum. The usual dose is one capsule three times daily, taken at least an hour before meals. Corpora lutea (P., D. & Co.) has proved advantageous in the treatment of functional amenorrhea, dysmenorrhea of ovarian origin, manifestations of physiologic or artificial menopause, neurasthenic symptoms during menstrual life, sterility not due to inadequate functioning of the other, repeated abortions not due to disease or mechanical factors, hyperemesis in the early months of pregnancy, and migraine occurring during the menstrual period. As one writer has well said, it seems highly probable that "in corpora lutea we have an agent that will prove a blessing to womankind."

Digitized by Google

The Battle Creek Method of Treating Cases of Drug Addiction

Alcohol, Opium, Cocaine, Tobacco and Other Drug Habits

The Battle Creek Sanitarium is not an inebriate asylum. Cases requiring physical restraint or likely to disturb other patients are not received. For a large class of intelligent persons who have through suffering become entangled in the toils of a drug habit and who are ready to co-operate with a rational effort to deliver them from the drug and from its effects the Battle Creek Sanitarium method offers a rational, safe and remarkably comfortable means of relief and without publicity.

This is not a drug method. Drug methods often leave the patient's nervous system shattered and his condition so wretched that he is very liable soon to drift back into the old habit.

There are no tricks of hypnotism or "suggestion" in the Battle Creek Method. The rational and physiological means employed not only remove the craving for the drug but deliver the patient from the pain or neurasthenic miseries to relieve which the drug was first used, and if faithfully employed finally reinstate the patient by removing the morbid effects resulting from the use of the drug.

A fuller account of the Battle Creek Sanitarium Method of treating drug addiction in its various forms will be sent on receipt of the attached coupon.

The Battle Creek Sanitarium,
Battle Creek, Mich.

THE SANITARIUM, **Box 280**
Battle Creek, Michigan

Please send to the undersigned full information concerning the Battle Creek method of treating cases of drug addiction.

Dr.....

Street.....

City..... State.....

Digitized by Google

MEDICAL MEMORANDA

Antiphlogistine is a physiological antagonist of the inflammatory process—deep-seated or superficial. It produces marked osmotic action upon the swollen tissues, thus relieving congestion because of its hygroscopic, hydrophilic properties It is antiseptic, soothing, and promptly effective.

Doctor, are you not often called upon, in making your house to house calls, to make examination of the nose, and throat, and ears, and other head cavities which require artificial light for their exploration, and do you not often find yourself at a loss because of light facilities? It would be a wonderful convenience to you, would it not, if you could carry your own reflex light around with you, so that you would always be equipped for such diagnostic work? Here, then, is precisely what you are looking for. The Ideal Electrical Illuminating Outfit will fill the bill exactly. It not only furnishes you the light, but also a tongue depressor, ear speculum, attachments for the mouth, and all the other appurtenances needed for the job. And all for the modest sum of $3.50. Order one today.

For the Protection of the Patient.—In this day of sophistication and substitution the earnest physician cannot be too careful in following up his prescriptions to see that his patients are given exactly what he wants them to have—and nothing else. Especially is this so in regard to remedies of exceptional quality, such as Gray's glycerine tonic comp. Numerous imitations of this reliable tonic are constantly being foisted on the unsuspecting, and when as a consequence of the patient failing to get the original "Gray's," the expected results do not materialize, the doctor's skill and ability are apt to be questioned. For the protection of his patient and in justice to himself, the physician should invariably write for "Gray's" as follows:

℞ Gray's glycerine comp.
(Purdue Frederick Co.) one bottle—16 oz.

By thus specifying an original package, the painstaking physician will safeguard his patients and insure his results.

The City Anemic.—The hard hum-drum city life, especially of those whose days are spent indoors, in offices, bending over desks, ledgers, and school books, is almost certain, sooner or later, to leave its traces upon the man, woman or child thus unfortunately situated. General sluggishness of metabolism, due to indoor confinement in a vitiated atmosphere, and lack of exercise, is followed by failing appetite and later by degenerative blood changes of anemic nature. While pepto-mangan (Gude) cannot, of course, remedy the cause of the anemia and general devitalization, it almost always assists materially in overcoming the anemic blood state, increases appetite and acts as a real tonic and general reconstructive. As pepto-mangan (Gude) is free from irritant effect upon digestion, it is readily borne and quickly absorbed and assimilated, and as it is non-astringent it does not cause constipation.

Purity in drugs is the basis of confidence. In 1847 Johann Hoff, the distinguished chemist originated a pure extract of malt as a scientific nutritive tonic. For sixty-seven years its purity has been maintained regardless of imitators. Twenty-two years ago the World's Columbian Exposition, in conferring the highest award upon Hoff's malt extract specifically mentioned its purity of ingredients. When Congress passed its pure food and drug law, Hoff's malt extract had long been the standard of purity. Recently one of the state institutions of Massachusetts tested Hoff's extract of malt bought in the open market and placed it on the honor roll for its purity. Eisner-Mendelson Co., of New York, will supply literature on request.

A Puncture-Proof Tire.—A new tire of especial interest to doctors has recently been put on the market by the Leather Tire Goods Company, Niagara Falls, N. Y. This is called the Woodworth trouble-proof tire. It is guaranteed to be puncture-proof and to give at least 5,000 miles of service under any condition. Unlike other puncture-proof tires there is nothing in this tire to make it hard riding or cause overheating. A strip of chrome tanned leather on the side which comes next to the road, prevents punctures without stiffening the tires or causing them to overheat. It has long been known that chrome tanned leather is practically puncture-proof but the Leather Tire Goods Company is the first firm that has succeeded in incorporating the leather in the rubber tire, and thus producing a puncture-proof tire that is resilient and non-heating. The tires are made of combed Sea Island cotton and very carefully inspected in the manufacture to prevent any possibility of defects. It is claimed for these tires that under ordinary conditions, they will average more than 10,000 miles, and if used with good tubes, the user will be free from tire troubles. A booklet showing Woodworth trouble-proof tires and a number of other devices valuable to motorists has just been published and can be obtained by writing to the manufacturers, the Leather Tire Goods Company, Niagara Falls, N. Y.

The Remedy of Choice in Cardiac Affections.—It is interesting to note the growing interest medical men are taking in cactina pillets as a safe and dependable cardiac tonic. This is not surprising; indeed the only surprising feature is that the efficiency of this remedy has not been more generally realized. Hardly any one drug, with the possible exception of digitalis has a broader field of activity, and there are many competent observers who place it first among cardiac remedies. Experience has shown that the most conspicuous influence of cactina upon the heart is its effect on the local nutrition and consequent increase of the muscular-motor energy. Certainly it is the heart tonic par excellence, since it increases heart action and restores nerve function with a promptness that is rarely observed with any other remedy. Made from a dependable preparation of Mexican cereus grandiflorus, cactina pillets are especially effective in functional disorders of the heart associated with feeble, irregular pulse, more or less dyspnea and a sense of chest oppression. In such cases the effect of cactina pillets is exceedingly gratifying, the heart being promptly steadied and strengthened, and dyspnea markedly relieved. Tachycardia and palpitation are quickly controlled, and the precardial sensations which cause so much apprehension are soon dispelled. In accomplishing the foregoing, the physician does not have to apprehend toxic or untoward effects, for cactina pillets are not only non-cumulative but totally devoid of all unpleasant or disagreeable action. It is hardly to be wondered at, therefore, that careful, painstaking physicians are not only using cactina pillets more extensively than ever, but are gradually coming to look upon this preparation of cactus as the remedy of choice in functional affections of the heart.

Digitized by Google

ST. LOUIS

INVITES YOU TO HER

FALL FESTIVITIES

OCTOBER 4 TO 10, 1915

VEILED PROPHET PAGEANT
Tuesday, October 5
Street Parade of 22 Electric Floats, costing, with the ball, between $50,000 and $60,000.

RIVER AND PARADE RACES
Sunday, October 10
Parade on the Mississippi River of more than 200 decorated motor boats, followed by speed-boat races and rowing races.

ST. LOUIS AGRICULTURAL FAIRS
October 4 to 9
EXHIBITS— Horse Show, Dairy Cattle Show, Swine and Sheep Exhibits, Agricultural Exhibits, Poultry Show, Tractor Show, Farm Machinery Exhibits, Mule Show.

AMUSEMENTS—Harness Races, Running Races, Mule Races, Automobile Races. The world's largest saddle horse stake—$3,000. Band concerts daily.

ST. LOUIS AUTOMOBILE SHOW
October 4 to 9
America's first display of 1916 models.

BUY-IN-ST. LOUIS DISPLAYS
October 4 to 9
Manifesting the supremacy of the St. Louis market.

SPECIAL EXHIBITS throughout the week at the Jefferson Memorial (home of the Missouri Historical Society), Shaw's Garden (America's foremost botanical park) and the City Art Museum, admission to all of which institutions is free.

Above Are Listed Only a Few of the Week's Gala Events.

. . . . COME . . . .

Protect your reputation—Patronize only honest druggists.

Genito-Urinary Diseases and Syphilis

Second Edition Revised

BY

EDGAR G. BALLENGER, M.D.

AND

OMAR F. ELDER, M.D.

557 PAGES WITH 109 ILLUSTRATIONS **PRICE $5.00 Net.**

THIS edition embodies the recent epoch-making discoveries in genito-urinary diseases and syphilis, among which may be mentioned: The more satisfactory treatment of gonorrhea; vaccine therapy; Rowntree and Geraghty's test for renal functional activity; pyelography; the Wassermann reaction and luetin test; the complement deviation test in gonorrhea; the cultivation of the spirocheta pallida; the use of the dark field illumination in the demonstration of the spirocheta pallida, the inoculation of animals with syphilis, and the discovery of salvarsan and neosalvarsan.

The writers' treatment of beginning gonorrhea by sealing argyrol in the urethra deserves especial mention, as it affords a very easy and thorough cure of incipient infections.

SEND FOR PROSPECTUS

E. W. ALLEN & COMPANY, Publishers,

21-23 W. Alabama St. **Atlanta, Georgia.**

Digitized by Google

The Tire You Have Been Looking For

The Woodworth Trouble-Proof Tire

A PERFECTLY resilient pneumatic tire that is guaranteed against punctures and guaranteed to outwear any other make of tire on the market.

In the Woodworth Trouble-Proof Tire there is a puncture-proof leather strip which is perfectly soft and flexible, so that the tire is not stiffened or any extra heat generated. This tire will ride and run as easy as any ordinary pneumatic tire.

Think of the satisfaction of having a tire that is guaranteed trouble-proof; of knowing when you start out you will reach your destination without tire troubles and that you obtain this not only without extra cost but at a cheaper cost per mile than with ordinary tires.

Send for free booklet giving full description and prices.

Leather Tire Goods Co., Manufacturers

Niagara Falls, N. Y.

Digitized by Google

PLEASED WITH THE PICTURE.

GRIFFIN, GA., Nov. 13, 1914.

"I have just received your art picture, "Innocence," and if your magazine is anywhere near as good as the picture, I will need two years subscription. I am therefore handing you another dollar, for which extend my time, and forward me one of the other poses."

J. RONDER ANTHONY.

WORTH DOUBLE THE MONEY.

LOS ANGELES, CAL., February 10, 1915.

Inclosed please find $1.00 for subscription. I do not remember just when it expires, but I do not want it to lapse. Your magazine is worth twice the money!

Sincerely yours,

C. A. JOHNSON, M. D.

A Rare Art Picture

FREE!

WHILE rummaging through an old book shop on the East Side of New York City, the Herald man discovered some rare art pictures—poses in the "altogether," similar to, but even more graceful than the famous "September Morn." The model is a well-known French divorcee, and the poses are perfect anatomically. Just the thing for the den or private office. We purchased the entire lot and will send one to every subscriber (paying in advance) as long as they last—which will not be long! Send a dollar bill or money order—new subscription or renewal—and you will get one of these rare art pictures —**none of them will be sold.** There are **four** different poses. If you desire more than one pose, send a subscription for two or more years in advance; or you may order the Herald sent to a doctor friend, and you will receive the pictures. If you want all four of the pictures, send $4.00 for 5 yearly subscriptions. These rare pictures will never be duplicated and no more copies can be secured. Money refunded if you are not satisfied. We have a few more copies of "The Injured Finger," and "September Morn" (in colors), if preferred.

All NEW subscriptions received this month will run until January, 1917

THE MEDICAL HERALD, Kansas City, Mo.
Subscription Department
The Most Original Medical Monthly in America.

IODUM-MILLER
TRADE MARK.
THE SOLUBLE IODINE

For External, Internal and Surgical Use.

Applied locally it is absorbed by and into the tissues and gives both a local and systemic action.

Taken internally it has a better therapeutic effect than Potassium Iodide and has not the disturbing properties of Potassium.

In surgery, both pre- and post-operative, **IODUM-MILLER**, because of its solubility and absorbability, acts as a germicide to the deep tissues as well as to the surface and there is no hardening nor abrasion of the surface as is the case when Iodine Tincture is used.

IOD-IZD-OIL

(MILLER'S)

SPRAY
INJECTION } SOLUTION
TAMPON

IOD-IZD-OIL (Miller's) is an ideal preparation for applying iodine to nose, throat, eye, ear, urethra, vagina and rectum.

Literature and samples on application.

MANUFACTURED ONLY BY THE
IODUM-MILLER COMPANY
406-409-410-411 Missouri Building
KANSAS CITY, MO.

HAVE YOU SEEN THE
New Monograph on Anesthesia
By R. J. Behan and M. C. Frenzel of Berlin
Free copy to new subscribers.
Send in your name today.

When you write to our advertisers, kindly mention the MEDICAL FORTNIGHTLY

SAL HEPATICA
The Ideal
Saline
Eliminant
In
Rheumatic
Conditions

Bristol-Myers Co.
New York

Digitized by Google

FEDERAL ANTI-NARCOTIC LAW
AND
GLYCO-HEROIN (SMITH)

The composition of Glyco-Heroin (Smith) is not being changed to meet any of the exemptions or privileges allowed under the so-called "Harrison Anti-Narcotic Law," and whereby it might be sold to the public.

Glyco-Heroin (Smith) will remain just what it always has been, and just what it was always intended to be, viz: a stable, uniform and dependable product for the convenience and use of physicians only, in the treatment of Cough, Bronchitis, Whooping Cough, etc.

In prescribing Glyco-Heroin (Smith) use ordinary prescription blanks. Give the name and address of patient, your own name and address in full, your registry number and date when written (no copy or other record required).

Prescriptions cannot be refilled

MARTIN H. SMITH CO., New York

Colden's Liquid Beef Tonic

In cases of impaired appetite, gastro-intestinal atony and disorders of digestion due to subnormal secretory activity, Colden's Liquid Beef Tonic

Has Been Found Effective

in arousing the appetite, stimulating the gastric glands, increasing the digestive secretions and the activity, indeed, of all the gustatory organs. When Anæmia is a complication, Colden's Liquid Beef Tonic with Iron is indicated. Sold by druggists.

Sample with Literature will be sent to physicians on request.

THE CHARLES N. CRITTENTON CO.
115 Fulton Street, New York

No physician can afford to be indifferent regarding the accurate filling of his prescription.

THE PASTEUR INSTITUTE
Of St. Louis

A Modern Institution for the Diagnosis and Treatment of Rabies

At this Institute we are prepared to handle cases of persons or animals bitten by Rabid Animals with the latest Pasteur method of preventive treatment. We are a branch of the well known New York Pasteur Institute which is the oldest institute of its kind on the Continent. We have long since discarded the older cord method and use **Glycerinized Brain Substance plus the Antirabic Serum,** guaranteeing the highest percentage of success and devoid entirely of danger of any kind.

We give both **personal and mail treatment. We will send by special delivery sealed glass ampules containing the treatment** to any physican who has a case for treatment. **The course consists of eighteen injections given on eighteen successive days. When writing or telegraphing for treatment, state age of patient and location and number of bites.**

Write us for pamphlet on Rabies, a classic article by Dr. Geo. Rambaud, Director of the New YorK Pasteur Institute.

Price of course of eighteen injections is $50.00.

Correspondence solicited. We have a treatment for valuable stock bitten by rabid animals. Further particulars can be obtained by addressing the

Pasteur Institute of St. Louis

R. B. H. GRADWOHL, M. D., Director
803 N. Garrison Avenue, St. Louis, Mo.
Telephones: Kinloch, Central 4133
Bell, Bomont 812

Within ten minutes of Union Station

Digitized by Google

UNIVERSITY OF MICHIGAN
3 9015 07019 2888

VENOSAL
A COMBINATION OF SALICYLATES AND COLCHICUM
An Intravenous Solution for the successful treatment of
RHEUMATISM–TONSILITIS
and other streptococcic infections.
THE INTRAVENOUS PRODUCTS CO. DENVER, COLO. U.S.A.
OUR BOOKLET "DIRECT MEDICATION" SENT TO ANY PHYSICIAN ON REQUEST.

RESPIRAZONE
The Most Effective Prescription Against
Hay Fever, Asthma and Croup
Free Samples to the Profession
THE TILDEN COMPANY
Manufacturing Pharmacists and Chemists
Since 1848
NEW LEBANON, N. Y. ST. LOUIS, MO.

No physician can afford to be indifferent regarding the accurate filling of his prescriptions.

WHEN A DOCTOR PRESCRIBES

"whiskey," he realizes that the whiskies of commerce contain elements that should never be administered to the sick and the aged. Because

Duffy's Pure Malt Whiskey

is made purposely to meet the requirements of the bedside by its purity and wholesomeness, we want every physician to have our new booklet, just off the press, entitled:

"POINTED OPINIONS FROM THE MEDICAL PROFESSION"

It contains illustrated charts, showing actual amounts of fusel oil and tannin found in beverage whiskies from thirty distilleries, as compared to the freedom from these injurious elements in the U.S.P. Standard and Duffy's Pure Malt.

In addition, the actual observations of results in practice of physicians extending over a period of years to date, will be found of intrinsic value.

In order that you may know the worth of Duffy's Pure Malt Whiskey in your own office practice, physician's sample will be sent prepaid upon request.

THE DUFFY MALT WHISKEY CO.
ROCHESTER, N.Y.

Digitized by Google

Defective Elimination

readily becomes a chronic condition since the toxemic patient lacks that initiative which is necessary to active physical exercise; thus *cause* and *effect* form a circle which must be broken by rational therapeutic treatment while proper hygienic conditions are being re-established.

Cystogen-Aperient

(Granular Effervescent Salt)

performs a *double service* by stimulating to normal function and by disinfecting the intestinal and urinary tracts.

Specially Indicated in the Treatment of Gouty Conditions and Auto-Intoxication of Self-Poisoning Diseases Such as Pellagra, Typhoid, Etc.

Cystogen-Aperient is not presented as a saline purgative, but as a rational therapeutic aid wherever treatment is based on elimination; it combines the *laxative and tonic* properties of Sodium Phosphate and Tartrate with the *diuretic urinary-antiseptic* and *solvent* action of Cystogen ($C_6H_{12}N_4$).

FORMULA: A teaspoonful contains { Cystogen gr. V. / Sod. Phos. gr. XXX. / Sod. Tart. gr. XXV.

DOSE: A teaspoonful in a glass of water t. i. d.

Samples on request

CYSTOGEN CHEMICAL CO.

515 Olive Street ST. LOUIS, U. S. A.

No physician can afford to take any risk of substitution, if he values his good name.

Doctor-

Are you using the

COMBS TREATMENT

in your Morphine and Drug Addiction Cases?

HYOS-SCO-PHINE and HYOS-SCO-PIPER

the strictly ethical combinations, are now being supplied to a large number of Physicians who prior to the Harrison Federal Anti-Narcotic law were very little interested in these patients.

If you are not acquainted with this gradual reduction treatment write for literature.

COMBS CHEMICAL COMPANY

948-958 Wolfram St. **CHICAGO, ILLINOIS**

SHERMAN'S BACTERINS

Preparations with a Record for RELIABILITY. **31 Different Varieties.**

Typhoid Fever yields more readily to **Typhoid Vaccine** than to any other remedy

When given early it often aborts the course of the disease

Write for Literature

G. H. SHERMAN, M. D.

Daily users of Vaccines use Sherman's

DETROIT, MICH.

Digitized by Google